

DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM
OTTAWA, CANADA

RESULTS OBTAINED IN 1903

FROM

TRIAL PLOTS OF
GRAIN, FODDER CORN, FIELD ROOTS
AND
POTATOES

BY

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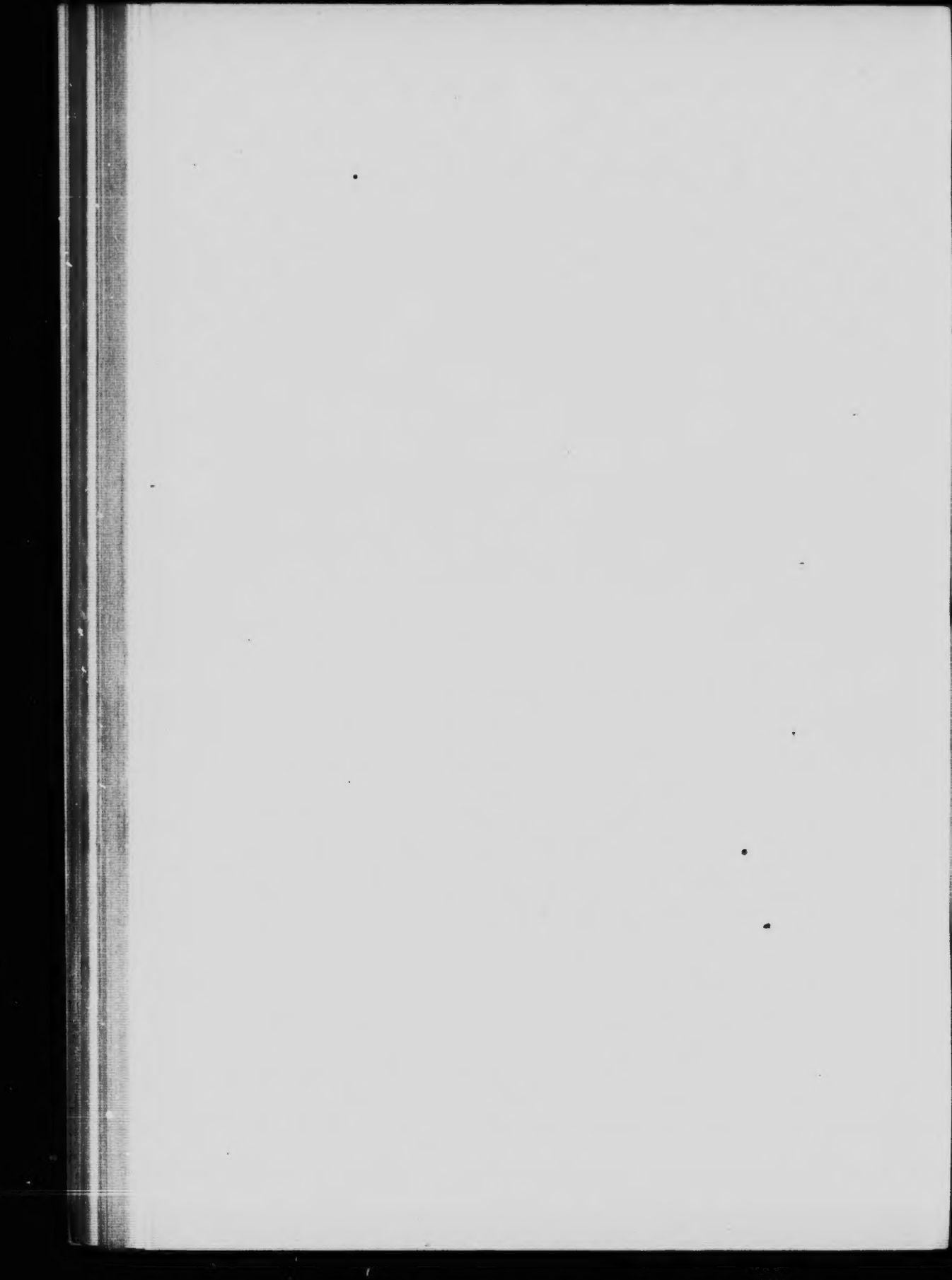


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To the Honourable
The Minister of Agriculture.

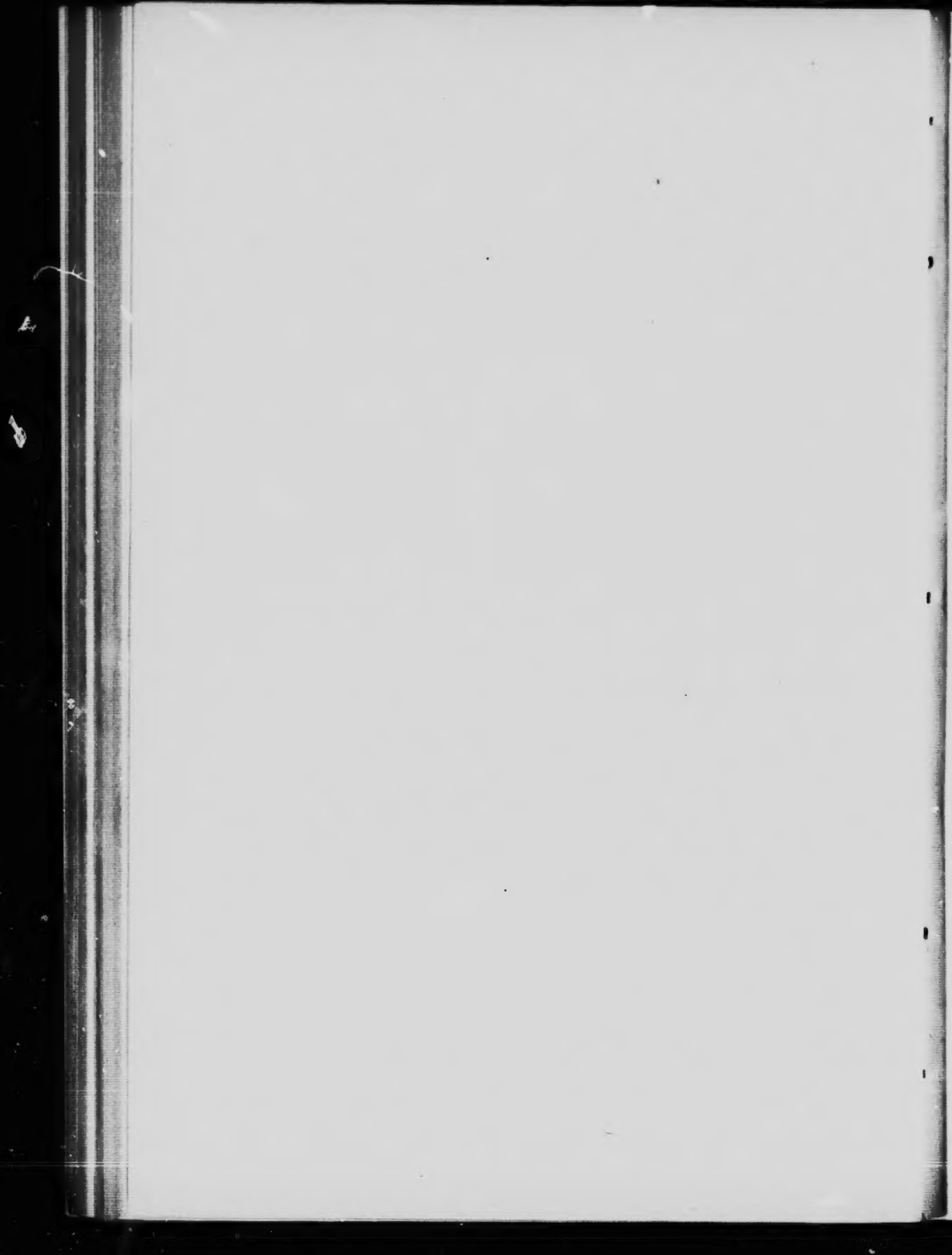
SIR,—I herewith submit for your approval Bulletin No. 44 of the Experimental Farm series, which has been prepared by the Experimentalist, Dr. C. E. Saunders and myself. There are presented in this publication the results of a large number of experiments, which have been conducted at all the experimental farms in your Department during the season of 1903, with oats, barley, spring wheat, peas, Indian corn, turnips, mangels, carrots, sugar beets and potatoes, in plots of uniform size, and with the crops grown under uniform conditions. The average results are also given of the tests for a series of years of those varieties which have proved most productive.

These trial plots are conducted with the object of gaining information as to the relative productiveness of the different sorts and their earliness in ripening. The returns show much variation in the weight of the crops grown and point to the importance of care in the choice of varieties of seed for sowing. It is hoped that these results giving the experience gained under some of the most important climatic variations found in the country, will prove useful to farmers in every part of Canada.

I have the honour to be,
Your obedient servant,

WM. SAUNDERS,
Director of Experimental Farms.

OTTAWA, December 10, 1903.



RESULTS OBTAINED IN 1903

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

BY WILLIAM SAUNDERS, LL.D., F.R.S.C., F.L.S., F.C.S., &c.
Director of Experimental Farms,

AND CHAS. E. SAUNDERS, B.A., Ph.D., Experimentalist.

During the past nine years experiments have been conducted on uniform trial plots at each of the Dominion Experimental Farms for the purpose of gaining information as to the most productive and earliest ripening varieties of grain, fodder corn, field roots and potatoes. In arranging for these plots the same varieties have been sown at each of the farms, the seed being supplied at the outset from a common stock. In each case seed has been sown early, and, as a rule, all the different sorts of the same crop have been sown on the same day or at most within two or three days so as to give to all an even start. The land chosen each year for these plots has been as nearly uniform in character as could be found and before sowing has been brought into a good condition of tilth. In this bulletin which is the ninth of the series, the details are arranged after the same plan as in the previous issues, except that the different varieties are placed in the tables in the order of their average productiveness at all the farms, instead of being arranged in the order of their yield at the Central Experimental Farm. The number of days required for all the sorts from sowing to ripening is also given and thus their relative earliness is shown.

In comparing the crops obtained from the several varieties in any one year with another, the relative positions occupied by the different sorts will often vary from lack of uniformity in the soil, and other causes. When, however, the average of such results can be given for a number of years the information becomes much more satisfactory and valuable. In the experience recorded near the end of this bulletin the

average crops obtained from the sowings of a number of successive years are shown, all those varieties which have been four years under trial being placed in competition with those which have been tested for longer periods.

The weather in the eastern parts of Canada was quite unusual during the past season. There was an almost unbroken drought from early in April until about the middle of June, which was followed by a long period of very wet weather. All the varieties of grain were more or less injured, but the early varieties of wheat suffered most. They were much dwarfed in growth and were heading out when the rains came, and although rapid growth followed, they did not recover to the same extent as the later ripening sorts. While all the varieties suffered a reduction in crop, the yields of the earliest varieties of wheat are in some cases remarkably low. The wet weather proved very favourable for the spread of rust, which further reduced the crop of grain. In the case of the field roots, the principal effect of the drought was to delay the germination of a large proportion of the seed of both sowings until about the middle of June, when the dormant seed of both first and second sowings germinated together.

OATS.

During the season of 1903, forty-five varieties of oats have been under trial. The size of the plots on which they were grown was one-fortieth of an acre at Ottawa, Ont., Nappan, N.S., and Agassiz, B.C.; while at Brandon, Man., and Indian Head, N.W.T., the plots were usually one-twentieth of an acre. The seed was sown at the rate of two bushels per acre; and the dates of sowing were as follows:—At Ottawa, April 20; Nappan, May 4; Brandon, May 5 and 6; Indian Head, April 25; and at Agassiz, April 17.

Particulars as to the character of the land in each case, and of the preparation and treatment it has had will be found in the annual report of the Experimental Farms for 1903.

At Brandon the plot of Banner oats being on the outside of the block near the road, was somewhat injured by traffic. The Tartar King seed was very plump and heavy, and the plants did not tiller to any great extent: for these reasons the plot was too thin for the best results.

In Canada the bushel of oats is 34 lbs.

UNIFORM TEST PLOTS OF OATS FOR 1903.

Number.	Name of Variety.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.							NUMBER OF DAYS FROM SOWING TO HARVESTING.																
		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.	
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Abundance.....	94 15	71 6	92 32	109 14	122 27	75 30	116	115	113	107	123	122												
2	White Giant.....	93 17	74 4	94 4	103 28	121 21	73 28	118	116	119	109	122	122												
3	Wide Awake.....	93 ..	66 16	88 8	113 18	134 4	62 22	117	118	114	110	122	120												
4	Sensation.....	92 8	67 22	96 28	91 6	121 16	82 ..	115	117	114	108	122	116												
5	Danish Island.....	91 14	60 20	90 20	108 8	115 ..	82 22	117	115	115	109	122	124												
6	Lincoln.....	90 15	62 12	89 14	108 28	129 29	61 26	118	115	113	109	122	122												
7	Banner.....	90 10	71 6	95 10	84 4	136 26	64 4	115	115	113	107	124	118												
8	Golden Tartarian.....	90 2	71 26	77 22	106 6	122 32	71 26	120	120	121	112	126	122												
9	Waverley.....	89 30	61 6	97 22	109 14	108 28	72 12	116	116	119	107	123	116												
10	Thousand Dollar.....	88 27	55 10	97 22	105 10	132 27	52 32	116	117	114	107	122	119												
11	Improved Ligowo.....	88 22	67 22	89 14	105 20	111 26	63 28	115	115	114	107	122	116												
12	Twentieth Century.....	87 30	71 6	97 22	104 14	110 20	55 20	116	119	112	109	122	117												
13	Bavarian.....	87 28	56 16	81 6	91 26	126 26	82 32	116	115	114	109	125	118												
14	Swedish Select.....	87 16	70 20	87 2	94 4	126 16	69 4	116	119	115	106	126	116												
15	Golden Giant.....	87 4	86 16	60 ..	109 14	118 18	61 6	120	116	119	116	126	123												
16	*Kendal White.....	86 30	67 2	75 10	91 26	127 2	73 8	117	116	114	109	126	118												
17	Holstein Prolific.....	86 28	55 10	82 12	107 32	127 32	60 30	116	116	113	109	123	120												
18	Mennonite.....	86 14	70 ..	82 12	98 28	119 34	61 6	115	117	113	105	123	117												
19	Early Golden Prolific.....	85 32	47 22	84 24	115 10	120 ..	63 2	117	116	116	109	126	116												
20	Black Beauty.....	85 22	67 2	84 24	93 8	122 12	60 30	114	115	108	106	123	116												
21	Columbus.....	85 20	70 20	62 12	104 14	111 26	78 22	116	115	115	108	126	117												
22	Improved American.....	85 6	61 26	84 24	95 10	125 10	58 28	115	115	114	107	122	118												
23	Siberian.....	84 29	70 20	96 16	98 28	89 9	69 4	119	118	114	110	123	118												
24	*Olive Black.....	84 22	61 6	88 8	83 8	121 26	63 28	118	117	116	112	128	119												
25	Golden Fleece.....	84 22	64 24	82 12	84 4	120 30	71 6	116	117	115	90	128	119												
26	Irish Victor.....	84 21	60 20	88 28	107 22	123 33	72 2	116	117	114	109	123	119												
27	Buckbee's Illinois.....	84 15	54 24	62 12	119 14	126 31	58 28	115	119	117	108	123	124												
28	Salines.....	84 3	62 32	85 30	95 10	116 1	60 10	120	119	121	111	124	124												
29	Golden Beauty.....	84 2	73 18	64 24	93 18	127 2	61 16	115	114	114	109	122	118												
30	Goldfinder.....	83 22	59 14	92 32	83 18	117 22	64 24	119	118	119	111	128	120												
31	American Triumph.....	83 2	65 30	58 28	98 18	123 18	58 18	118	120	117	109	125	118												
32	*Milford White.....	82 20	59 14	74 4	77 22	119 14	82 12	117	116	114	112	126	117												
33	White Schonen.....	81 18	48 8	88 8	100 20	106 8	62 12	114	114	114	109	116	118												
34	New Zealand.....	81 16	50 ..	70 20	114 24	112 22	59 14	123	120	120	115	133	126												
35	Joanette (Black).....	80 14	55 10	94 4	83 18	105 30	63 8	115	118	110	107	127	115												
36	American Beauty.....	80 8	55 30	71 26	99 14	115 20	58 18	116	117	113	109	123	120												
37	*Olive White.....	79 10	60 20	71 26	80 20	109 14	74 4	117	116	116	112	126	117												
38	*Kendal Black.....	79 6	57 22	75 10	82 12	117 2	63 18	118	117	114	112	126	120												
39	Scotch Potato.....	79 3	77 2	68 8	91 26	100 15	57 32	117	116	115	109	123	120												
40	*Pense White.....	79 2	64 4	69 14	80 ..	115 10	66 16	117	114	116	112	126	118												
41	Pioneer (Black).....	78 11	48 8	85 30	88 18	104 19	64 14	114	118	108	106	123	115												
42	*Milford Black.....	77 24	51 6	80 ..	87 12	114 24	55 10	118	117	114	112	126	119												
43	Tartar King.....	77 3	61 26	70 30	77 22	97 22	77 28	113	112	109	107	122	115												
44	*Pense Black.....	76 28	41 6	81 6	85 10	115 ..	61 16	119	117	116	112	128	124												
45	Wallis.....	76 6	44 4	83 18	99 4	97 22	56 16	117	115	114	110	125	122												

* Cross-bred varieties produced at the Experimental Farms.

The twelve varieties of oats which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

		Per acre. Bush. Lbs.				Per acre. Bush. Lbs.	
1. Abundance....	94	15	7. Banner..	90	10		
2. White Giant..	93	17	8. Golden Tartarian..	90	2		
3. Wide Awake..	93	..	9. Waverley..	89	30		
4. Sensation....	92	8	10. Thousand Dollar..	88	27		
5. Danish Island....	91	14	11. Improved Ligowo..	88	22		
6. Lincoln....	90	15	12. Twentieth Century..	87	30		

An average crop of 90 bushels 30 lbs. per acre.

The twelve varieties of oats which have produced the largest crops during 1903, at the several experimental farms, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre. Bush. Lbs.				Per acre. Bush. Lbs.	
1. Golden Giant..	86	16	7. Abundance..	71	6		
2. Scotch Potato..	77	2	8. Twentieth Century..	71	6		
3. White Giant..	74	4	9. Siberian..	70	20		
4. Golden Beauty....	73	18	10. Columbus..	70	20		
5. Golden Tartarian..	71	26	11. Swedish Select..	70	20		
6. Banner..	71	6	12. Mennonite..	70	..		

An average crop of 73 bushels 6 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPA, N.S.

		Per acre. Bush. Lbs.				Per acre. Bush. Lbs.	
1. Sensation..	98	23	7. Joannette..	94	4		
2. Twentieth Century..	97	22	8. White Giant..	94	4		
3. Thousand Dollar..	97	22	9. Abundance..	92	32		
4. Waverley..	97	22	10. Goldfinder..	92	32		
5. Siberian..	96	16	11. Danish Island..	90	20		
6. Banner..	95	10	12. Improved Ligowo....	89	14		

An average crop of 94 bushels 27 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre. Bush. Lbs.				Per acre. Bush. Lbs.	
1. Buckbee's Illinois..	119	14	7. Waverley ..	109	14		
2. Early Golden Prolific..	115	10	8. Lincoln..	108	23		
3. New Zealand ..	114	24	9. Danish Island..	108	8		
4. Wide Awake..	113	18	10. Holstein Prolific ..	107	32		
5. Golden Giant..	109	14	11. Irish Victor..	107	22		
6. Abundance..	109	14	12. Golden Tartarian..	106	6		

An average crop of 110 bushels 28 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Banner..	136 26	7. Golden Beauty..	127 2
2. Wide Awake..	134 4	8. Buckbee's Illinois..	126 31
3. Thousand Dollar..	132 27	9. Bavarian..	126 26
4. Lincoln..	129 29	10. Swedish Select..	126 16
5. Holstein Prolife..	127 23	11. Improved American..	125 10
6. Kendal White..	127 2	12. Irish Victor..	123 33

An average crop of 128 bushels 26 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Bavarian..	83 8	7. Abundance..	75 30
2. Danish Island..	82 23	8. Olive White..	74 4
3. Milford White..	82 12	9. White Giant..	73 23
4. Sensation..	82 ..	10. Kendal White..	73 8
5. Columbus..	78 23	11. Waverley..	72 12
6. Tartar King..	78 28	12. Irish Victor..	72 2

An average crop of 77 bushels 12 lbs. per acre.

The average crop of all the varieties of oats tested at each of the experimental farms in 1903 was as follows :—At Ottawa, 62 bushels 9 lbs. per acre ; Nappan, 81 bushels 18 lbs. ; Brandon, 97 bushels 4 lbs. ; Indian Head, 117 bushels 23 lbs. ; and at Agassiz, 66 bushels 4 lbs. The average return given by the whole of the varieties of oats tested at all the farms was 84 bushels 18 lbs. per acre.

BARLEY.

During the season of 1903, fifteen varieties of two-rowed barley and twenty varieties of six-rowed barley have been under test. The barley plots were of the same size as those sown with oats. The seed was used in the proportion of two bushels per acre; and the dates of sowing were as follows:—At Ottawa, Ont., April 17 and 18; Nappan, N.S., May 13; Brandon, Man., May 7 and 8, and June 5; Indian Head, N.W.T., April 29, and at Agassiz, B.C., April 25.

All the plots of two-rowed barley at Brandon were frozen on September 4, so that the number of days for maturing can only be given approximately. The sowing of these plots so late (June 5) accounts for the unsatisfactory results. The plots were first sown in good season (May 8), but were washed out by a heavy rain storm, making a second sowing necessary.

In Canada the bushel of barley is 48 lbs.

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY FOR 1903.

Number.	Name of Variety	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.						NUMBER OF DAYS FROM SOWING TO HARVESTING.							
		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Invincible.....	55 34	46 32	55 40	32 24	77 14	66 12	108	105	103	101	115	115	115	
2	French Chevalier.....	54 28	44 28	58 16	27 34	71 22	70 40	109	105	101	105	117	117	117	
3	Canadian Thorpe.....	54 10	46 32	59 8	24 28	71 2	69 28	106	107	101	102	108	114	114	
4	Standwell.....	53 22	35 ..	52 24	31 42	80 40	67 4	110	109	103	106	115	115	115	
5	*Beaver.....	53 16	42 24	60 40	32 4	56 12	75 ..	107	104	100	104	112	117	117	
6	Danish Chevalier.....	52 24	37 4	65 ..	28 46	66 2	65 20	109	107	101	105	117	115	115	
7	*Sidney.....	51 26	39 8	43 16	39 18	62 24	73 16	107	107	101	100	108	117	117	
8	*Dunham.....	51 16	37 44	49 8	40 30	52 14	76 32	107	108	101	102	109	114	114	
9	*Gordon.....	51 14	41 32	46 32	30 ..	64 28	73 26	105	106	101	105	107	108	108	
10	Newton.....	50 26	31 12	64 8	33 16	61 2	62 44	107	108	101	104	115	109	109	
11	*Logan.....	48 40	37 4	45 40	37 34	82 14	61 12	106	109	101	101	105	112	112	
12	*Harvey.....	48 ..	40 ..	40 40	35 ..	58 16	65 40	105	109	101	100	103	110	110	
13	*Fulton.....	47 10	37 4	48 16	33 36	58 46	57 44	106	108	103	101	103	116	116	
14	*Jarvis.....	47 ..	46 12	40 ..	30 30	61 22	56 32	105	106	101	100	108	109	109	
15	*Clifford.....	45 28	36 32	42 24	31 42	57 14	59 28	106	109	100	105	105	109	109	

* Cross-bred varieties produced at the Experimental Farms.

The six varieties of two-rowed barley which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Invincible.. . . .	55	34	4. Standwell.. . . .
2. French Chevalier.. . . .	54	23	5. Beaver.. . . .
3. Canadian Thorpe.. . . .	54	10	6. Danish Chevalier.. . . .
			53 23
			53 16
			53 24

An average crop of 53 bushels 46 lbs. per acre.

The six varieties of two-rowed barley which have given the largest crops during 1903, at the several experimental farms, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Canadian Thorpe	46	32	4. French Chevalier.. . . .
2. Invincible.. . . .	46	32	5. Beaver.. . . .
3. Jarvis.. . . .	46	12	6. Gordon.. . . .
			44 23
			42 24
			41 32

An average crop of 44 bushels 35 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Danish Chevalier.. . . .	65	..	4. Canadian Thorpe.. . . .
2. Newton.. . . .	64	8	5. French Chevalier.. . . .
3. Beaver.. . . .	60	40	6. Invincible.. . . .
			59 8
			58 16
			55 40

An average crop of 60 bushels 27 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Dunham.. . . .	40	30	4. Harvey.. . . .
2. Sidney.. . . .	39	18	5. Fulton.. . . .
3. Logan.. . . .	37	34	6. Newton.. . . .
			35 ..
			33 36
			33 16

An average crop of 36 bushels 30 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Standwell.. . . .	80	40	4. Canadian Thorpe.. . . .
2. Invincible.. . . .	77	14	5. Danish Chevalier.. . . .
3. French Chevalier	71	23	6. Gordon.. . . .
			2
			2
			64 23

An average crop of 71 bushels 42 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Dunham.. . . .	76	32	4. Sidney.. . . .
2. Beaver.. . . .	75	..	5. French Chevalier.. . . .
3. Gordon.. . . .	73	28	6. Canadian Thorpe.. . . .
			73 16
			70 40
			60 23

An average crop of 73 bushels 8 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at each of the experimental farms in 1903 was as follows :—At Ottawa, 39 bushels 47 lbs. per acre ; Nappan, 51 bushels 24 lbs. ; Brandon, 32 bushels 32 lbs ; Indian Head, 64 bushels 5 lbs., and at Agassiz, 66 bushels 38 lbs. The average return given by the whole of the varieties of two-rowed barley tested at all the farms was 50 bushels 47 lbs. per acre.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY FOR 1903.

Number.	Name of Variety	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.						NUMBER OF DAYS FROM SOWING TO HARVESTING.					
		Average of all Farms.	Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.	Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
1	Mensury	62	40 38	36 60	.. 71	32 63	36 80	103	101	101	95	108	106
2	* Brome	61	38 53	36 53	16 66	32 63	26 71	103	101	103	95	113	103
3	Odessa	60	12 44	23 60	40 68	12 71	12 58	107	107	97	84	106	100
4	* Trooper	60	.. 52	4 65	.. 53	16 64	8 65	102	98	99	98	110	109
5	Oderbruch	59	38 42	44 66	32 63	16 54	38 71	12 100	100	98	92	107	103
6	* Nugent	59	32 42	4 64	8 72	4 54	28 65	105	107	104	94	112	109
7	* Empire	59	32 45	20 65	40 61	32 66	32 63	104	100	100	96	113	109
8	* Summit	59	21 54	28 54	8 67	14 61	2 60	104	98	104	98	113	109
9	Common	59	20 44	28 63	16 61	32 60	20 67	99	99	99	91	106	101
10	* Mansfield	58	30 34	28 56	40 68	12 63	6 73	103	101	101	96	108	109
11	* Stella	58	1 51	12 58	16 53	46 54	3 72	104	98	104	94	112	114
12	* Albert	56	2 47	4 59	8 58	36 53	26 61	103	106	99	95	108	109
13	* Royal	56	40 41	12 58	16 50	40 60	.. 68	102	106	99	95	110	100
14	* Yale	55	22 45	.. 53	16 70	.. 53	46 56	.. 104	100	104	94	112	109
15	* Garfield	53	30 52	4 50	.. 55	20 55	30 55	.. 102	98	100	94	111	109
16	* Claude	53	24 35	40 48	16 55	20 65	40 62	4 103	107	99	94	112	106
17	* Argyle	53	20 34	28 54	8 55	10 56	32 65	40 103	100	100	95	111	108
18	Rennet's Improved	53	4 42	44 45	40 53	46 57	14 65	20 99	98	99	92	106	102
19	Baxter	52	8 45	20 59	8 41	12 50	20 64	23 100	97	99	95	108	103
20	Champion	45	40 40	20 49	8 32	24 45	20 61	32 96	96	96	88	103	99

* Cross bred varieties produced at the Experimental Farms.

The six varieties of six-rowed barley which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury..	62	40	4. Trooper..	60	..
2. Brome..	61	38	5. Oderbruch..	59	33
3. Odessa..	60	12	6. Nugent..	59	22

An average crop of 60 bushels 35 lbs. per acre.

The six varieties of six-rowed barley which have given the largest crops during 1903, at the several experimental farms, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Summit..	54	28	4. Garfield..	52	4
2. Brome..	53	38	5. Stella..	51	12
3. Trooper..	52	4	6. Albert..	47	4

An average crop of 51 bushels 39 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Oderbruch..	66	33	4. Nugent..	64	8
2. Empire..	65	40	5. Common..	63	16
3. Trooper..	65		6. Odessa..	60	40

An average crop of 64 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Nugent..	72	4	4. Summit	67	14
2. Mensury..	71	32	5. Brome.	66	32
3. Yale..	70		6. Mansfield..	66	12

An average crop of 69 bushels per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Odessa....	71	12	4. Mensury..	63	36
2. Claude..	65	40	5. Brome..	63	26
3. Trooper..	64	8	6. Mansfield..	63	6

An average crop of 65 bushels 13 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Mensury..	80		4. Brome..	71	32
2. Mansfield..	73	16	5. Oderbruch..	71	12
3. Stella..	72	24	6. Empire..	68	36

An average crop of 72 bushels 44 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at each of the experimental farms in 1903 was as follows :—At Ottawa, 44 bushels 22 lbs. per acre ; Nappan, 57 bushels 12 lbs. ; Brandon, 58 bushels 44 lbs. ; Indian Head, 58 bushels 15 lbs. ; and at Agassiz, 63 bushels 34 lbs. The average return given by the whole of the varieties of six-rowed barley tested at all the farms was 56 bushels 45 lbs. per acre.

SPRING WHEAT.

Fifty-eight varieties of spring wheat have been grown on the uniform test plots during the past season. The plots were of the same size as those sown with oats, and the seed was used at the rate of one and one-half bushels per acre. The dates of sowing were as follows :—At Ottawa, Ont., April 14 ; Nappan, N.S., April 29 ; Brandon, Man., April 21 to 24 ; Indian Head, N.W.T., April 18, and at Agassiz, B.C., April 18.

In Canada the bushel of wheat is 60 lbs.

UNIFORM TEST PLOTS OF SPRING WHEAT FOR 1903.

Number.	Name of Variety.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.												NUMBER OF DAYS FROM SOWING TO HARVESTING.					
		Average of all Farms.		Ottawa, Ont.	Naplan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.		Ottawa, Ont.	Naplan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.				
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.					
1	*Advance.....	35	14 34	40	32	40	28	10 38	42	40	123	115	118	121	142	111			
2	Roumanian.....	34	36 27	..	21	20	44	40 41	..	39	50	125	115	122	124	143	119		
3	Wellman's Fife.....	34	18 29	..	33	..	30	20 33	10	41	127	122	124	123	142	123			
4	*Byron.....	34	10 26	20	42	40	27	40 35	29	38	50	119	108	119	123	133	114		
5	Monarch.....	33	8 28	..	35	20	26	..	35	..	41	20	125	123	121	139	121		
6	*Preston.....	33	58 29	40	28	..	23	40 43	10	40	20	122	113	121	123	136	119		
7	White Connell.....	32	58 27	20	35	20	28	..	35	..	41	10	126	122	124	123	141	121	
8	White Fife.....	32	39 27	..	36	..	27	40 36	5	36	30	126	123	124	123	141	118		
9	Goose.....	32	32 19	..	22	..	46	20 36	10	39	10	123	115	120	126	141	114		
10	*Chester.....	32	27 19	20	40	..	33	30 36	15	33	10	122	116	120	120	138	115		
11	*Crawford.....	32	25 21	40	36	40	29	..	37	15	37	30	119	108	122	120	133	112	
12	*Clyde.....	32	18 25	..	34	..	25	30 36	..	41	..	124	118	122	124	133	123		
13	Red Fife.....	32	14 25	11	36	40	24	20 38	30	36	..	126	123	121	12	142	121		
14	*Norval.....	32	9 25	40	34	40	27	..	38	45	34	40	121	118	120	122	133	112	
15	*Laurel.....	32	..	21	..	..	26	..	36	20	40	40	127	121	124	123	147	121	
16	White Russian.....	31	58 26	40	30	40	30	40 31	50	40	..	127	121	122	124	147	123		
17	*Percy.....	31	44 19	40	26	40	29	10 36	30	46	40	122	115	122	122	136	111		
18	Hungarian.....	31	40 27	20	24	40	28	20 42	..	36	..	122	113	121	122	137	116		
19	Pringle's Champlain.....	31	38 26	..	30	..	24	50 41	40	35	40	123	117	121	119	139	119		
20	*Huron.....	31	28 26	..	26	40	27	40 39	..	38	..	123	118	121	123	136	115		
21	*Benton.....	31	24 30	20	20	40	29	20 36	30	40	10	124	113	122	122	138	123		
22	*Alpha.....	31	22 20	20	30	..	28	..	37	40	40	123	118	120	123	136	118		
23	*Essex.....	31	20 25	20	38	..	21	30 32	20	39	30	126	121	122	122	147	120		
24	*Stanley.....	31	12 22	40	28	40	27	40 39	10	37	50	121	109	121	120	136	118		
25	Power's Fife (Minn. No. 149).....	31	6 22	..	37	20	26	50 32	30	36	50	128	124	124	124	147	122		
26	*Crown.....	31	6 23	20	31	20	24	50 37	..	39	..	122	118	120	120	139	115		
27	Harrison Bearded.....	31	4 25	40	31	20	29	20 35	20	34	40	126	114	120	124	147	125		
28	McKendry's Fife (Minn. No. 181).....	30	57 30	20	32	..	25	..	30	25	37	129	124	124	124	147	123		
29	*Weldon.....	30	48 24	..	23	20	28	40 43	40	34	20	125	118	122	120	143	123		
30	Robin's Rust Proof.....	30	28 28	20	28	40	25	30 30	50	39	..	123	118	124	122	136	116		
31	*Admiral.....	30	24 19	..	36	..	27	40 32	30	36	50	123	116	122	122	136	119		
32	*Bishop.....	30	19 21	40	31	20	28	40 28	15	41	40	120	108	120	122	136	115		
33	Rio Grande.....	30	2 20	40	36	40	26	..	31	30	35	20	126	124	120	122	142	122	
34	*Fraser.....	30	1 19	40	19	20	31	20 39	35	40	10	117	106	120	116	130	114		
35	*Angus.....	30	..	21	40	26	..	30	..	38	50	122	115	122	120	136	116		
36	*Dawn.....	29	48 20	20	34	..	30	20 33	40	30	40	120	112	120	119	132	115		
37	*Blair.....	29	36 22	40	20	..	31	30 33	50	40	..	123	115	122	122	133	124		
38	*Early Riga.....	29	14 10	..	42	..	22	20 35	10	36	40	110	106	115	119	129	112		
39	Australian, No. 9.....	29	10 14	40	29	20	34	..	32	..	35	50	125	109	124	121	147	122	
40	Minnesota, No. 163.....	29	8 29	20	28	40	21	20 27	..	39	20	128	124	124	125	147	122		
41	Australian, No. 27.....	28	57 23	20	20	..	23	20 37	35	40	30	127	121	124	122	147	121		
42	Red Fern.....	28	48 21	40	22	..	25	50 34	10	40	20	125	118	121	122	142	121		
43	*Countess.....	28	48 22	20	25	20	20	50 35	50	39	40	120	108	122	121	133	115		
44	*Cartier.....	28	30 21	20	18	40	27	40 33	30	41	20	119	108	121	119	133	114		
45	*Hastings.....	28	24 19	40	16	40	25	40 38	20	41	40	122	113	122	120	142	112		
46	Australian, No. 19.....	28	21 24	20	17	20	22	20 33	45	44	..	127	123	124	125	147	114		
47	*Plumper.....	28	18 20	..	16	40	28	..	34	50	42	..	122	114	122	125	136	115	
48	Australian, No. 23.....	28	11 24	20	33	20	21	50 26	55	34	30	128	122	124	124	147	122		
49	Red Swedish.....	27	42 18	20	35	20	18	10 29	20	37	20	126	121	122	120	147	114		
50	*Casal.....	27	29 14	20	26	..	26	50 30	55	39	20	125	118	124	122	136	126		
51	Colorado.....	27	25 22	..	24	..	19	20 35	25	36	20	123	114	118	122	138	124		
52	*Progress.....	27	22 18	40	24	40	23	40 34	30	35	20	123	114	121	123	136	122		
53	Japanese.....	27	20 19	..	30	40	26	40 27	40	32	40	117	106	122	116	130	112		
54	*Vernon.....	26	48 18	40	30	..	27	..	25	30	32	122	118	121	122	136	115		
55	Australian, No. 25.....	26	27 22	20	18	..	22	..	31	15	38	40	126	121	124	124	147	116	
56	Australian, No. 10.....	26	17 18	..	27	20	21	40 26	46	37	40	128	122	124	125	147	122		
57	Australian, No. 13.....	25	49 21	..	32	..	18	..	22	36	35	30	128	123	124	125	147	122	
58	Haynes' Blue Stem (Minn. No. 169).....	24	57 24	20	26	..	18	30 21	35	34	20	129	126	124	125	147	124		

* Cross-bred varieties produced at the Experimental Farms.

† These varieties were not fully ripe, but had to be cut on Sept. 8, on account of frost. The number of days maturing is therefore only roughly estimated from the condition of the grain when cut.

The twelve varieties of spring wheat which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

		Per acre.				Per acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Advance..	..	33	14	7. White Connell..	..	32	33
2. Roumanian..	..	34	34	8. White Fife..	..	32	33
3. Wellman's Fife..	..	34	18	9. Goose..	..	32	32
4. Byron..	..	34	10	10. Chester..	..	32	27
5. Monarch..	..	33	8	11. Crawford..	..	32	25
6. Preston..	..	32	53	12. Clyde..	..	32	18

An average crop of 33 bushels 18 lbs. per acre.

The twelve varieties of spring wheat which have given the largest crops at the several experimental farms in 1903, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre.				Per acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Advance..	..	34	40	7. Robin's Rust Proof..	..	28	20
2. Benton..	..	30	20	8. Monarch..	..	28	..
3. McKendry's Fife (Minn. 161).....	..	30	20	9. White Connell..	..	27	20
4. Preston..	..	29	40	10. Hungarian..	..	27	20
5. Minn. No. 163..	..	29	20	11. White Fife..	..	27	..
6. Wellman's Fife..	..	29	..	12. Roumanian..	..	27	..

An average crop of 29 bushels 2 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPA, N.S.

		Per acre.				Per acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Byron..	..	42	40	7. Crawford..	..	36	40
2. Early Riga..	..	42	..	8. Red Fife..	..	36	40
3. Chester..	..	40	..	9. Rio Grande..	..	36	40
4. Wellman's Fife..	..	38	..	10. Admiral..	..	36	..
5. Essex..	..	38	..	11. White Fife..	..	36	..
6. Power's Fife (Minn. 149).....	..	37	20	12. Laurel..	..	36	..

An average crop of 38 bushels per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.				Per acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Goose..	..	46	20	7. White Russian..	..	30	40
2. Roumanian..	..	44	40	8. Wellman's Fife..	..	30	20
3. Australian No. 9..	..	34	..	9. Dawn..	..	30	20
4. Chester..	..	33	30	10. Angus..	..	30	..
5. Blair..	..	31	30	11. Benton..	..	29	20
6. Fraser..	..	31	20	12. Percy..	..	29	10

An average crop of 33 bushels 26 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per acre.				Per acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Weldon..	..	43	40	7. Stanley..	..	39	10
2. Preston..	..	43	10	8. Huron..	..	39	..
3. Hungarian..	..	42	..	9. Angus..	..	38	50
4. Pringle's Champlain..	..	41	40	10. Norval..	..	38	45
5. Roumanian..	..	41	..	11. Red Fife..	..	38	30
6. Fraser..	..	39	35	12. Hastings..	..	38	20

An average crop of 40 bushels 18 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIS, B.C.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1	Percy..	48	40	7.	Monarch..	41	30
2	Australian No. 13..	44	..	8.	Cartier..	41	30
3	Advance..	42	40	9.	White Connell..	41	10
4	Plumper..	42	..	10.	Wellman's Five..	41	..
5	Mastings..	41	40	11.	Clyde..	41	..
6	Bishop..	41	40	12.	Alpha..	40	50

An average crop of 42 bushels 7 lbs. per acre.

The average crop of all the varieties of spring wheat tested at each of the experimental farms in 1903, was as follows :—At Ottawa, 23 bushels 3 lbs. per acre; Nappan, 29 bushels 15 lbs. per acre; Brandon, 26 bushels 46 lbs.; Indian Head, 34 bushels 24 lbs.; and at Agassis, 38 bushels 10 lbs. The average return given by the whole of the varieties of spring wheat at all the farms was 30 bushels 20 lbs. per acre.

EMMER ("SPELTS")

The common variety of emmer, to which the incorrect name of Spelts is often given, was grown as usual at all the experimental farms this past season. In comparing the yield of this grain with wheat a deduction of twenty per cent or more must be made from the weight of the emmer on account of the husk, inasmuch as this grain retains its husk after ordinary threshing.

The following table shows the yield of common emmer obtained at each experimental farm ; and for comparison the highest yield of wheat at each farm is also inserted.

UNIFORM TEST PLOTS OF COMMON EMMER FOR 1903.

Where Grown.	Number of Days Maturing.	Yield per Acre as Threshed.	Estimated Yield per Acre of Clean Grain.		Highest Yield of Wheat Obtained.	
			In pounds.	In Bushels of 60 lbs. Each.		
		Lbs.	Lbs.	Bush. Lbs.	Bush. Lbs.	
Ottawa.....	117	1,300	1,040	17 20	34	40
Nappan.....	123	1,530	1,316	20 16	43	40
Brandon.....	127	2,030	2,104	35 4	45	20
Indian Head.....	143	3,280	2,624	43 44	46	..*
Agassiz.....	123	3,190	1,753	29 12	46	40

*This yield was obtained from a macaroni wheat known as Mahmoudi, a variety not yet tested at all the farms.

PEASE.

Forty varieties of pease have been under trial during the past season. The plots were of the same size as those sown with oats; and the quantity of seed used per acre varied from two to three bushels, depending on the size of the pea. The dates of sowing were as follows:—At Ottawa, Ont., April 22, Nappan, N.S., May 9; Brandon, Man., April 24 to 27; Indian Head, N.W.T., May 5; and at Agassiz, B.C., April 21. In Canada the bushel of pease is 60 lbs.

UNIFORM TEST PLOTS OF PEASE FOR 1903.

Number.	Name of Variety.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.						NUMBER OF DAYS FROM SOWING TO HARVESTING.												
		Average of all Farms.		Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B. C.	Average.	Ottawa.	Nappan.	Brandon.	Indian Head.	Agassiz.						
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.						
1	English Grey.....	44	8	34	20	34	..	63	..	55	50	23	30	121	121	123	126	126	116	116
2	*Macoun.....	43	42	23	..	38	40	57	..	55	30	44	20	121	122	123	118	126	116	116
3	Early Britain	43	14	24	40	24	..	60	20	60	30	46	40	121	122	123	118	126	116	116
4	*Archer.....	41	30	27	20	42	..	51	40	53	10	33	20	125	123	124	127	128	122	122
5	Crown.....	41	6	34	..	40	..	53	..	40	50	37	40	120	119	121	117	121	122	122
6	*Alma.....	41	4	26	..	31	20	64	40	50	10	33	10	124	117	123	126	134	123	123
7	German White.....	40	34	27	20	25	20	54	40	49	10	46	20	124	120	128	126	126	118	118
8	Pride	40	26	28	40	34	..	50	..	53	10	36	20	124	123	121	124	128	123	123
9	*Arthur.....	40	10	22	40	41	40	46	40	42	10	44	40	121	118	123	124	124	116	116
10	*Mackay.....	38	50	20	..	30	40	50	20	57	50	35	20	120	120	126	127	132	121	121
11	Wisconsin Blue	38	38	25	40	23	20	50	..	55	10	39	..	124	119	128	122	134	119	119
12	Mummy.....	38	28	30	..	37	20	45	20	37	30	43	..	122	122	123	124	124	119	119
13	*Pearl.....	38	26	25	20	24	40	54	..	45	30	42	40	124	119	126	129	126	121	121
14	Chancellor.....	38	23	30	20	..	+	41	40	37	30	44	..	120	118	121	115	124	121	121
15	Large White Marrowfat	38	4	27	20	29	20	43	40	43	30	46	30	123	119	123	128	124	122	122
16	*King.....	37	46	27	20	20	..	47	..	56	30	38	..	124	121	124	124	131	121	121
17	Black-eyed Marrowfat.....	37	36	22	40	28	..	49	..	50	30	38	50	125	118	124	130	128	123	123
18	*Agnes.....	37	30	23	..	35	20	43	..	46	50	39	20	122	119	123	125	131	122	122
19	Daniel O'Rourke.....	37	16	32	..	36	40	41	..	41	10	35	30	120	118	122	124	121	116	116
20	*Kent.....	36	56	29	..	26	..	45	20	49	10	35	10	126	123	127	129	132	119	119
21	*Gregory.....	36	48	30	40	23	40	34	20	59	10	31	10	126	120	129	126	130	119	119
22	Prussian Blue.....	36	44	33	40	25	20	34	..	55	50	34	50	122	118	123	124	126	121	121
23	*Paragon.....	36	42	31	20	13	20	38	40	60	..	40	10	125	117	124	129	130	123	123
24	*Victoria.....	36	26	31	20	26	..	54	40	38	10	32	..	126	125	127	132	128	119	119
25	*Carleton.....	36	22	23	..	30	..	33	40	49	50	45	20	126	124	124	130	134	118	118
26	Gold-n Vine.....	36	10	32	40	18	40	53	40	39	10	36	40	121	121	122	126	121	119	119
27	*Elliot.....	35	52	23	20	33	20	43	20	40	50	32	30	125	120	126	127	128	123	123
28	*Nelson.....	35	42	15	40	32	40	44	..	45	30	40	40	121	119	123	121	126	118	118
29	*Bruce.....	35	12	30	40	30	..	28	20	52	50	34	10	124	122	122	120	128	120	120
30	*Trilly.....	35	6	27	40	26	40	49	40	39	50	31	40	126	118	128	128	132	123	123
31	*Picton.....	35	2	31	..	16	40	46	40	48	30	32	20	123	122	122	126	124	121	121
32	*Perth.....	34	50	29	..	28	40	36	..	47	50	32	40	122	118	124	124	124	118	118
33	Prince Albert	34	44	26	20	27	20	47	..	37	30	35	30	123	119	121	129	126	119	119
34	New Potter.....	33	56	23	40	26	..	31	40	49	10	39	10	124	119	126	124	128	122	122
35	Centennial.....	33	4	20	40	30	40	27	40	44	50	41	30	124	122	124	127	126	119	119
36	*Duke.....	32	54	30	40	20	40	34	20	45	10	33	40	125	120	122	129	133	126	126
37	*Fergus.....	32	36	21	..	21	20	43	20	43	30	33	50	127	120	129	130	134	121	121
38	*Prince.....	31	54	26	20	18	..	37	..	45	10	33	..	124	123	123	129	126	121	121
39	White Wonder.....	30	58	22	40	13	20	47	20	31	30	40	..	118	116	122	116	115	122	122
40	*Lanark.....	30	54	23	20	20	..	24	..	44	50	42	20	123	119	127	129	126	116	116

* Cross-bred varieties produced at the Experimental Farms.

† Failed.

The twelve varieties of pease which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. English Grey..	..	44	8	7. German White..	40
2. Macoun..	..	43	43	8. Pride..	40
3. Early Britain..	..	43	14	9. Arthur..	40
4. Archer..	..	41	30	10. Mackay..	38
5. Crown..	..	41	6	11. Wisconsin Blue..	38
6. Alma..	..	41	4	12. Mummy..	38

An average crop of 40 bushels 59 lbs. per acre.

The twelve varieties of pease which have given the largest crops at the several experimental farms during 1903, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. English Grey..	..	34	20	7. Victoria..	31
2. Crown..	..	34	..	8. Picton..	31
3. Prussian Blue..	..	33	40	9. Gregory..	30
4. Golden Vine..	..	33	40	10. Duke..	30
5. Daniel O'Rourke..	..	32	..	11. Bruce..	20
6. Paragon..	..	31	20	12. Chancellor..	20

An average crop of 31 bushels 53 "a. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPA, N.S.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. Arthur..	..	44	40	7. Agnes..	35
2. Archer..	..	42	..	8. English Grey..	34
3. Crown..	..	40	..	9. Pride..	34
4. Macoun..	..	38	20	10. Elliot..	33
5. Mummy..	..	37	20	11. Nelson..	32
6. Daniel O'Rourke..	..	36	40	12. Alma..	31

An average crop of 36 bushels 40 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. Alma..	..	64	40	7. Pearl..	54
2. English Grey..	..	63	..	8. Golden Vine..	53
3. Early Britain..	..	60	20	9. Crown..	53
4. Macoun..	..	57	..	10. Archer..	51
5. Victoria..	..	54	40	11. Mackay..	50
6. German White..	..	54	40	12. Pride..	50

An average crop of 55 bushels 35 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1. Early Britain..	..	60	30	7. Prussian Blue..	..	55	50
2. Paragon..	..	60	..	8. Macoun..	..	55	30
3. Gregory..	..	59	10	9. Wisconsin Blue..	..	55	10
4. Mackay..	..	57	50	10. Archer..	..	53	10
5. King..	..	54	30	11. Pride..	..	53	10
6. English Grey..	..	55	50	12. Bruce..	..	52	50

An average crop of 56 bushels 18 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1. Early Britain..	..	46	40	7. Chancellor..	..	44	..
2. Large White Marrowfat..	..	46	30	8. Pearl..	..	42	40
3. German White..	..	46	20	9. Lanark..	..	42	20
4. Carleton..	..	45	20	10. Mummy..	..	42	..
5. Arthur..	..	44	40	11. Centennial..	..	41	30
6. Macoun..	..	44	30	12. Nelson..	..	40	40

An average crop of 43 bushels 55 lbs. per acre.

The average crop of all the varieties of pease tested at each of the experimental farms in 1903, was as follows :—At Ottawa, 26 bushels 53 lbs. per acre ; Nappan, 28 bushels 1 lb. ; Brandon, 44 bushels 58 lbs. ; Indian Head, 47 bushels 40 lbs. ; and at Agassiz, 37 bushels 53 lbs. The average return given by the whole of the varieties at all the farms was 37 bushels 6 lbs. per acre.

INDIAN CORN.

The number of varieties of corn tested in 1903 was twenty-three. These were all sown in rows three feet apart and the plants thinned out to six or eight inches apart in the rows. The dates of sowing were as follows :—At Ottawa, Ont., May 27 ; Nappan, N.S., June 2 ; Brandon, Man., May 28 ; Indian Head, N.W.T., May 22 ; and at Agassiz, B.C., May 20.

The crop in each case was cut green and put into the silo for the winter feeding of stock. The dates of cutting were :—At Ottawa, September 30 ; Nappan, October 6 ; Brandon, September 4 ; Indian Head, September 9 ; and at Agassiz, October 10. The yield per acre has been calculated in each case from the weight obtained from two rows each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF INDIAN CORN FOR 1903.

Number.	Name of Variety.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS.					
		Average of all Farms.	Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.
		Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.
1	Early Mastodon.....	21 1,699	27 835	17 650	21 768	18 300	24 1,940
2	Thoroughbred White Flint.....	21 112	17 1,200	16 1,330	23 232	18 300	24 1,500
3	Eureka.....	20 1,536	14 1,370	17 320	23 1,532	20 700	22 1,760
4	Angel of Midnight.....	19 1,076	13 180	13 950	19 1,072	23 600	26 680
5	Giant Prolific Ensilage.....	19 1,061	20 755	17 1,750	19 280	15 800	24 1,720
6	Superior Fodder.....	19 1,037	16 780	17 100	21 1,824	16 1,000	25 1,480
7	Red Cob Ensilage.....	19 504	17 100	17 870	19 1,072	11	31 480
8	Compton's Early.....	18 1,404	18 1,840	14 1,370	20 392	17 1,200	22 220
9	Champion White Pearl.....	18 693	18 355	14 600	24 312	14 1,700	20 480
10	Manmoth Cuban.....	18 656	19 1,600	14 1,150	19 1,072	13 1,500	23 1,960
11	Early Butler.....	18 269	19 280	14 270	19 1,336	15 1,900	21 1,640
12	Salzer's All Gold.....	17 1,658	15 1,460	15 800	14 248	19 500	24 1,280
13	North Dakota White.....	17 1,332	14 1,709	11 1,100	18 960	19 500	24 400
14	Longfellow.....	17 1,112	15 1,240	15 1,570	19 290	19 1,600	17 870
15	Pride of the North.....	17 912	19 509	12 530	15 1,680	13 1,500	26 350
16	Selected Leaning.....	17 346	17 1,970	18 850	18 432	13 400	18 80
17	Manmoth Eight-Rowed Flint.....	16 652	15 140	11 1,100	15 1,152	18 300	21 570
18	King Philip.....	16 278	11 1,100	14 600	18 1,752	15 1,900	20 40
19	King of the Earliest.....	16 263	21 955	14 50	15 360	12 1,300	17 650
20	Sanford.....	15 1,988	15 1,570	15 1,350	16 1,000	16 560	15 1,460
21	White Cap Yellow Dent.....	15 1,926	15 1,460	13 1,500	18 1,752	14 1,700	16 1,220
22	Cloud's Early Yellow.....	14 1,298	16 560	11 500	16 472	11 1,100	17 1,860
23	Evergreen Sugar.....	14 72	14 600	11	15 1,680	12 1,300	16 780

The six varieties of Indian corn which have given the heaviest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Early Mastodon..	21 1,639	4. Angel of Midnight..	19 1,078
2. Thoroughbred White Flint.. . . .	21 112	5. Giant Prolific Ensilage.. . . .	19 1,061
3. Eureka..	20 1,536	6. Superior Fodder..	19 1,037

An average crop of 20 tons 753 lbs. per acre.

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1903, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Early Mastodon..	27 835	4. Mammoth Cuban..	19 1,600
2. King of the Earliest..	21 955	5. Pride of the North..	19 500
3. Giant Prolific Ensilage..	20 755	6. Early Butler..	19 280

An average crop of 21 tons 488 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Selected Leaming..	18 850	4. Early Mastodon..	17 650
2. Giant Prolific Ensilage..	17 1,750	5. Eureka..	17 320
3. Red Cob Ensilage..	17 870	6. Superior Fodder..	17 100

An average crop of 17 tons 1,090 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Eureka..	23 1,532	4. Superior Fodder..	21 1,824
2. Thoroughbred White Flint.. . . .	23 232	5. Early Mastodon..	21 768
3. Champion White Pearl..	24 312	6. Compton's Early..	20 392

An average crop of 24 tons 177 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Angel of Midnight..	25 600	4. North Dakota White..	19 500
2. Eureka..	20 700	5. Salzer's All Gold..	19 500
3. Longfellow..	19 1,600	6. Early Mastodon..	18 300

An average crop of 20 tons 700 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Red Cob Ensilage..	31 480	4. Superior Fodder..	25 1,480
2. Angel of Midnight..	26 580	5. Early Mastodon..	24 1,940
3. Pride of the North..	26 350	6. Giant Prolific Ensilage..	24 1,720

An average crop of 26 tons 1,902 lbs. per acre.

The average weight of all the varieties, cut green, of Indian corn tested at each of the experimental farms in 1903, was as follows :—At Ottawa, 17 tons 459 lbs. per acre ; Nappan, 14 tons 1,535 lbs. ; Brandon, 19 tons 681 lbs. ; Indian Head, 16 tons 550 lbs ; and at Agassiz, 21 tons 1,880 lbs. The average return given by the whole of the varieties at all the farms was 17 tons 1,821 lbs. per acre.

TURNIPS.

Twenty-one varieties of turnips were tested in 1903, sown in drills or on the flat 2½ feet apart. Two sowings were made at each farm, the second sowing being about two weeks later than the first. The dates of sowing will be found in the accompanying table. The dates on which the roots were pulled were as follows :—At Ottawa, Ont., October 19 ; Nappan, N.S., October 27 ; Brandon, Man., October 7 ; Indian Head, N.W.T., October 9 ; and at Agassiz, B.C., October 24. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF TURNIPS FOR 1903.

Number.	Name of Variety.	AVERAGE OF ALL FARMS.			OTTAWA, ONT.			NAFFAN, N.S.			BRANDON, MAN.			INDIAN HEAD, N.W.T.			AGASSIZ, B.C.		
		First Sowing.	Second Sowing.	Sown May 7.	Sown May 21.	Per Acre. Tons. Lbs.	Sown May 15.	Sown May 23.	Per Acre. Tons. Lbs.	Sown May 30.	Sown June 13.	Per Acre. Tons. Lbs.	Sown May 16.	Sown May 23.	Per Acre. Tons. Lbs.	Sown May 13.	Per Acre. Tons. Lbs.	Sown May 27.	
1	Mammoth Clyde	38 1,566	28 628	41 685	30 1,545	47 1,040	38 1,035	41 1,150	16 1,000	21 1,956	16 1,000	21 1,956	16 1,000	41 1,160	39 540	41 1,160	39 540	39 540	
2	New Century	38 639	26 1,935	47 1,865	23 1,850	47 50	38 725	39 672	14 1,040	17 848	18 960	14 1,040	17 848	39 1,860	39 1,860	39 1,860	39 1,860	39 1,860	
3	Emperor Swede	38 1,31	27 1,845	37 1,570	20 425	47 710	40 25	38 51	14 1,508	19 644	26 8	14 1,508	19 644	47 1,270	38 1,300	47 1,270	38 1,300	38 1,300	
4	Jumbo	36 1,854	26 1,130	46 225	24 1,065	44 1,225	37 745	32 680	16 1,000	22 1,540	16 1,000	16 1,000	22 1,540	38 890	38 1,880	38 890	38 1,880	38 1,880	
5	Hartley's Bronze	36 1,219	31 957	29 245	27 780	41 1,490	35 455	36 560	22 880	22 880	22 880	22 880	22 880	37 580	37 580	37 580	37 580	37 580	
6	Perfection Swede	36 1,118	29 1,928	25 1,975	24 1,045	50 320	43 625	35 1,280	16 1,000	22 1,936	29 80	16 1,000	22 1,936	45 1,080	36 980	45 1,080	36 980	36 980	
7	Good Luck	35 1,518	28 1,750	40 1,510	28 1,090	44 1,760	41 500	36 884	14 1,040	21 1,966	22 880	14 1,040	21 1,966	41 1,490	37 1,240	41 1,490	37 1,240	37 1,240	
8	Drummond Purple Top	35 1,269	26 727	33 990	30 225	43 1,120	35 125	42 480	17 320	10 196	22 1,868	14 1,040	21 1,966	36 1,755	33 465	36 1,755	33 465	33 465	
9	Kangaroo	35 1,062	26 1,712	34 1,430	24 1,065	47 875	34 1,795	39 1,302	15 1,580	12 948	23 1,520	15 1,580	23 1,520	40 355	36 765	40 355	36 765	36 765	
10	Elephant's Master	34 1,960	26 1,427	33 1,155	20 260	48 30	37 910	40 1,312	15 1,580	12 948	23 1,520	15 1,580	23 1,520	40 355	36 765	40 355	36 765	36 765	
11	Sutton's Champion	34 1,754	28 522	26 1,625	24 1,830	39 1,530	38 1,550	30 1,200	15 360	17 990	28 238	15 360	17 990	33 660	33 660	33 660	33 660	33 660	
12	Imperial Swede	34 1,333	30 1,583	30 300	29 740	43 965	37 85	40 520	19 1,000	17 990	28 238	19 1,000	17 990	42 1,800	36 000	42 1,800	36 000	36 000	
13	Hall's Westbury	34 386	28 1,037	23 695	19 1,270	41 1,820	37 1,735	39 1,200	21 240	23 464	27 1,440	21 240	23 464	40 530	41 500	40 530	41 500	41 500	
14	Halewood's Bronze Top	34 383	28 701	23 1,520	21 1,890	48 1,845	34 1,465	38 1,880	17 320	19 143	26 1,328	17 320	19 143	37 1,240	35 620	37 1,240	35 620	35 620	
15	Skirwings	34 171	29 73	25 1,490	19 445	44 605	38 1,550	40 520	20 920	22 1,012	31 852	20 920	22 1,012	33 1,320	35 1,560	33 1,320	35 1,560	35 1,560	
16	Magnum Bonum	34 79	28 1,961	30 555	24 345	49 1,000	41 1,390	43 1,120	18 960	13 400	23 1,620	18 960	13 400	31 1,360	31 1,360	31 1,360	31 1,360	31 1,360	
17	Selected Purple Top	33 1,881	28 607	29 575	28 1,915	47 1,370	40 555	34 1,960	16 730	18 1,894	21 1,032	16 730	18 1,894	38 1,880	38 1,880	38 1,880	38 1,880	38 1,880	
18	Bangholm Selected	33 1,373	25 1,044	29 905	24 15	46 235	35 455	34 1,960	19 290	19 1,792	19 1,600	19 290	19 1,792	34 1,960	32 680	34 1,960	32 680	32 680	
19	Shanrock Purple Top	33 506	26 1,328	33 825	26 965	41 1,325	35 1,115	36 600	15 680	15 96	24 312	15 680	15 96	45 1,410	45 1,410	45 1,410	45 1,410	45 1,410	
20	East Lothian	32 1,122	27 1,367	23 1,520	23 860	41 665	36 435	36 1,920	15 1,680	15 96	24 312	15 1,680	15 96	45 1,410	45 1,410	45 1,410	45 1,410	45 1,410	
21	Carter's Elephant	32 424	24 1,500	27 120	17 320	39 1,365	32 680	38 560	14 1,040	20 1,316	21 240	14 1,040	20 1,316	30 1,360	30 1,360	30 1,360	30 1,360	30 1,360	

* Destroyed by turnip fly.

The six varieties of turnips which have given the heaviest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Mammoth Clyde..	38 1,596	4. Jumbo..	36 1,854
2. New Century..	38 659	5. Hartley's Bronze..	36 1,219
3. Emperor Swede..	33 131	6. Perfection Swede..	36 118

An average crop of 37 tons 920 lbs. per acre.

The six varieties of turnips which have given the heaviest crops at the several experimental farms during the season of 1903, are the following :—

(Where not otherwise stated the quantities given are all from the early sown plots.)

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. New Century..	47 1,865	4. Mammoth Clyde..	41 665
2. Jumbo..	46 235	5. Good Luck..	40 1,510
3. Kangaroo..	44 1,430	6. Emperor Swede....	37 1,570

An average crop of 43 tons 213 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Perfection Swede..	50 320	4. Elephant's Master..	48 30
2. Magnum Bonum..	49 1,000	5. Selected Purple Top..	47 1,370
3. Halewood's Bronze Top..	43 1,845	6. Mammoth Clyde..	47 1,040

An average crop of 48 tons 1,268 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Magnum Bonum..	43 1,120	4. Elephant's Master..	40 1,312
2. Drummond Purple Top..	42 480	5. Selected Purple Top..	40 520
3. Mammoth Clyde..	41 1,160	6. Skirvings....	40 520

An average crop of 41 tons 852 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Hartley's Bronze (2nd sowing)....	32 152	4. Imperial Swede (2nd sowing)....	23 268
2. Skirvings (2nd sowing)..	31 832	5. Hall's Westbury (2nd sowing)..	27 1,440
3. Perfection Swede (2nd sowing)....	29 80	6. Halewood's Bronze Top (2nd sowing)....	26 1,328

An average crop of 29 tons 353 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per acre. Tons. Lbs.			Per acre. Tons. Lbs.
1. Emperor Swede..	.. . . . .	47 1,270	4. Hall's Westbury..	.. . . . .	42 1,800
2. East Lothian..	.. . . . .	45 1,410	5. Imperial Swede..	.. . . . .	41 1,820
3. Perfection Swede..	.. . . . .	45 1,080	6. Good Luck..	.. . . . .	41 1,490

An average crop of 44 tons 478 lbs. per acre.

The crops from the two sowings of turnips at the experimental farms in 1903 have averaged per acre, as follows :—

		Tons.	Lbs.
Central Experimental Farm, first sowing....	.. . . . .	32	1,126
“ “ second sowing..	.. . . . .	24	974
Experimental Farm, Nappan, first sowing....	.. . . . .	45	192
“ Nappan, second sowing....	.. . . . .	37	1,256
“ Brandon, first sowing....	.. . . . .	38	1,465
“ Brandon, second sowing..	.. . . . .	16	1,955
“ Indian Head, first sowing .....	.. . . . .	18	1,345
“ Indian Head, second sowing..	.. . . . .	23	1,407
“ Agassiz, first sowing....	.. . . . .	39	347
“ Agassiz, second sowing..	.. . . . .	37	328

The average crop from all the plots at all the farms was, for the first sowing, 34 tons 1,695 lbs., and for the second sowing, 27 tons 1,984 lbs.; showing an advantage in favour of the first sowing of 6 tons 1,711 lbs. per acre. It will be seen that the early sown plots have given the larger crops at all the farms except at Indian Head, N.W.T.

MANGELS.

Sixteen varieties of mangels have been under test during 1903. All were sown in drills or on the flat in rows 2½ feet apart. Two sowings were made at each farm, the second sowing being about two weeks later than the first. The dates of sowing will be found in the accompanying table. The dates on which the roots were pulled were as follows :—At Ottawa, Ont., October 19 ; Nappan, N.S., October 21 ; Brandon, Man., September 21 ; Indian Head, N.W.T., October 8 ; and at Agassiz, B.C., October 22. The yield per acre has been calculated in each case from the weight of roots gathered from two rows, each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF MANGELS FOR 1903.

Number.	Name of Variety.	AVERAGE OF ALL FARMS.		OTTAWA, ONT.		NAPPAK, N.S.		BRANDOX, MAY.		INDIAN HEAD, N. W. T.		AGASSIZ, B.C.	
		First Sowing.	Second Sowing.	Sown May 7.	Sown May 21.	Sown May 13.	Sown May 29.	Sown May 30.	Sown June 13.	Sown May 14.	Sown May 20.	Sown April 28.	Sown May 12.
		Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.
1	Mammoth Long Red	39 1,761	31 1,479	41 335	21 900	41 5	36 1,765	43 744	23 1,520	26 536	29 1,064	46 1,156	46 1,555
2	Mam. Yellow Intermediate.	37 936	27 886	34 1,630	15 1,845	46 1,225	37 745	33 1,320	24 1,368	32 812	24 840	39 1,635	34 1,680
3	Half Long Sugar White ...	36 1,102	27 1,836	35 620	15 1,350	40 1,675	30 1,710	36 1,392	28 760	29 1,796	17 1,968	40 25	46 1,300
4	Selected Yellow Globe.....	36 290	26 513	39 375	17 815	45 90	35 475	27 1,704	23 728	29 80	19 008	39 1,206	26 1,940
5	Giant Yellow Intermediate	35 1,392	26 1,493	34 475	17 815	45 1,575	36 600	25 160	23 992	33 1,716	28 496	39 1,035	36 560
6	Lion Yellow Intermediate ..	35 910	26 1,834	30 225	19 1,435	46 235	41 5	29 1,400	22 880	32 132	17 1,704	30 540	33 1,145
7	Prize Winner Yellow Globe	34 515	25 1,132	32 845	18 630	43 1,450	37 415	31 1,380	21 1,560	28 1,948	18 1,552	34 970	31 1,505
8	Triumph Yellow Globe	34 273	24 109	40 190	18 1,125	41 1,325	30 225	33 1,584	20 656	26 800	24 576	28 1,460	26 1,965
9	Selected Mann. Long Red.	33 838	29 714	24 1,500	22 385	43 1,120	39 1,265	32 1,736	23 1,784	26 496	25 1,064	37 1,340	34 970
10	Prize Mann. Long Red...	33 638	26 1,500	32 360	20 1,250	45 255	37 1,240	32 1,472	22 88	26 1,592	25 1,480	29 1,520	27 1,440
11	Half Long Sugar Roxy.....	33 634	24 1,671	29 740	14 215	41 170	33 185	37 912	20 1,712	27 516	18 1,024	41 830	36 1,320
12	Giant Yellow Globe.....	32 297	26 1,592	25 1,645	16 1,900	45 585	36 1,425	25 1,480	21 1,560	29 1,706	30 720	33 1,950	23 265
13	Gate Post.....	31 1,730	24 840	34 1,795	20 1,580	32 1,670	22 550	27 1,968	23 200	29 1,400	19 1,000	33 1,815	26 270
14	Yellow Intermediate.....	31 396	24 130	29 1,730	14 495	40 850	32 1,175	30 720	20 712	26 892	26 800	26 1,730	26 1,470
15	Giant Sugar Mangel.	31 264	24 1,764	34 1,185	15 1,680	33 495	25 985	27 912	20 1,712	25 1,480	24 1,104	34 1,300	37 1,340
16	Leviathan Long Red.....	29 318	25 503	23 200	13 1,885	43 1,800	35 125	23 232	18 960	24 1,236	27 1,176	27 130	31 370

The six varieties of mangels which have given the heaviest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mammoth Long Red..	39 1,761	4. Selected Yellow Globe..	35 390
2. Mamm. Yellow Intermediate.. . .	37 936	5. Giant Yellow Intermediate..	35 1,392
3. Half Long Sugar White..	36 1,162	6. Lion Yellow Intermediate..	35 910

An average crop of 36 tons 1,732 lbs. per acre.

The six varieties of mangels which have produced the heaviest crops at the several experimental farms during 1903, are the following. (Unless otherwise stated the yields given are all from the earliest sown plots) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mammoth Long Red..	41 335	4. Half Long Sugar White..	35 620
2. Triumph Yellow Globe..	40 190	5. Gate Post..	34 1,795
3. Selected Yellow Globe..	39 375	6. Mammoth Yellow Intermediate..	34 1,630

An average crop of 37 tons, 1,158 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mammoth Yellow Intermediate ..	46 1,225	4. Giant Yellow Globe..	45 585
2. Lion Yellow Intermediate	46 235	5. Prize Mammoth Long Red.. . . .	45 255
3. Giant Yellow Intermediate.. . . .	45 1,575	6. Selected Yellow Globe..	45 90

An average crop of 45 tons, 1,328 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1 Mammoth Long Red..	42 744	4. Mammoth Yellow Intermediate ..	33 1,320
2. Half Long Sugar White..	36 1,392	5. Selected Mammoth Long Red.. . .	32 1,736
3. Triumph Yellow Globe..	33 1,584	6. Prize Mammoth Long Red.. . . .	32 1,472

An average crop of 35 tons, 708 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1 Giant Yellow Intermediate.. . . .	33 1,716	4. Giant Yellow Globe (2nd sowing)..	30 720
2. Mammoth Yellow Intermediate ..	32 812	5. Half Long Sugar White..	29 1,796
3. Lion Yellow Intermediate.. . . .	32 152	6. Mammoth Long Red (2nd sowing)	29 1,664

An average crop of 31 tons 810 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mammoth Long Red....	48 1,185	4. Mammoth Yellow Intermediate ..	39 1,695
2. Half Long Sugar White (2nd sowing)	46 1,390	5. Selected Yellow Globe..	39 1,200
3. Half Long Sugar Rosy..	41 830	6. Giant Yellow Intermediate..	39 1,035

An average crop of 42 tons 1,223 lbs. per acre.

The crops from the two sowings of mangels at the experimental farms in 1903, have averaged per acre as follows :—

	Tons.	Lbs.
Central Experimental Farm, first sowing.... .	82	1,237
“ “ second sowing.. . . .	17	1,400
Experimental Farm, Nappan, first sowing.....	42	408
“ Nappan, second sowing.... .	34	311
“ Brandon, first sowing.. . . .	30	1,094
“ Brandon, second sowing.. . . .	22	949
“ Indian Head, first sowing.. . . .	28	1,453
“ Indian Head, second sowing.....	23	1,523
“ Agassiz, first sowing.... .	35	1,925
“ Agassiz, second sowing.. . . .	34	1,439

The average crop from all the plots at all the farms was, from the first sowing, 54 tons 134 lbs., and from the second sowing, 26 tons 1,124 lbs.; showing an advantage in favour of early sowing of ~ tons 1,019 lbs. per acre.

CARROTS

Eleven different sorts of carrots were tested during 1903, all being sown in drills or on the flat two feet apart. Two sowings were made in each case, the second sowing being two weeks later than the first. The dates of sowing will be found in the accompanying table. The dates on which the carrots were pulled were as follows :—At Ottawa, Ont., October 19 ; Nappan, N.S., October 27 ; Brandon, Man., October 19 ; Indian Head, N.W.T., October 12 ; and at Agassiz, B.C., October 27.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF CARROTS FOR 1903.

Number.	Name of Variety.	AVERAGE OF ALL FARMS.		OTTAWA, ONT.		NAIPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.	
		First Sowing.	Second Sowing.	Sown May 7.	Sown May 21.	Sown May 15.	Sown May 29.	Sown May 16.	Sown June 6.	Sown May 3.	Sown May 16.	Sown April 27.	Sown May 11.
		Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.
1	Ontario Champion.....	23 352	18 993	29 1,070	22 550	30 225	23 1,375	21 240	11 1,700	10 54	9 1,800	25 160	25 1,400
2	Giant White Voeges.....	23 273	18 1,736	29 80	21 570	29 905	19 1,600	15 1,080	12 1,300	9 1,008	12 1,060	31 1,000	28 430
3	Mamm. White Intermediate..	22 1,573	18 134	30 1,875	22 1,210	27 615	24 675	14 1,700	8 60	8 500	8 1,100	32 1,175	26 1,825
4	New White Intermediate....	21 1,369	17 857	33 1,815	25 160	24 675	22 880	21 240	10 900	9 876	11 704	19 940	17 1,440
5	Improved Short White.....	21 975	17 1,024	28 430	20 755	20 1,580	20 920	22 1,320	12 640	9 1,404	9 1,800	26 160	24 1,065
6	White Belgian.....	19 1,534	16 241	27 1,110	19 1,930	18 1,950	17 155	17 1,640	10 1,780	9 1,140	10 1,120	24 1,830	22 230
7	Half Long Chantenay.....	18 1,178	14 1,363	21 75	16 175	23 300	18 300	17 320	10 1,120	12 684	10 1,912	19 610	17 1,310
8	Long Yellow Stump Rooted..	17 1,980	15 1,565	26 1,810	18 300	22 880	21 1,375	10 900	11 1,320	9 1,140	8 1,088	30 090	18 1,280
9	Half Long White.....	17 599	15 1,948	21 1,890	20 1,745	19 445	18 1,620	16 1,440	8 720	7 652	9 1,572	21 570	22 265
10	Carter's Orange Giant.....	16 1,455	15 228	21 1,065	18 135	17 630	15 1,350	11 880	9 1,900	9 1,820	9 1,900	23 060	22 15
11	Early Gem.....	16 410	14 1,315	16 1,495	15 1,020	19 1,105	19 445	14 600	11 1,320	11 1,892	8 1,160	18 900	13 67

The six varieties of carrots which have given the heaviest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Ontario Champion.. . . .	22 352	4. New White Intermediate.. . .	21 1,309
2. Giant White Vosges.. . . .	23 273	5. Improved Short White.. . . .	21 975
3. Mamra. White Intermediate.. . . .	22 1,573	6. White Belgian.. . . .	19 1,534

An average crop of 22 tons 3 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops at the several experimental farms during the season of 1903, are the following. (Unless otherwise stated, the yields given are all from the earliest sown plots) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. New White Intermediate.. . . .	23 1,815	4. Giant White Vosges.. . . .	29 80
2. Mammoth White Intermediate....	30 1,875	5. Improved Short White.. . . .	28 430
3. Ontario Champion.. . . .	29 1,070	6. White Belgian.. . . .	27 1,110

An average crop of 29 tons 1,730 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Ontario Champion.. . . .	30 225	4. New White Intermediate.. . . .	24 675
2. Giant White Vosges.. . . .	29 905	5. Half Long Chantenay.. . . .	23 200
3. Mammoth White Intermediate....	27 615	6. Long Yellow Stump Rooted.. . .	22 880

An average crop of 26 tons 250 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Improved Short White.... . . .	22 1,320	4. White Belgian.. . . .	17 1,640
2. New White Intermediate.... . .	21 240	5. Half Long Chantenay.... . .	17 320
3. Ontario Champion.. . . .	21 240	6. Half Long White.. . . .	16 1,440

An average crop of 19 tons 867 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Giant White Vosges (2nd sowing)..	12 1,030	4. New White Intermediate (2nd sowing)...	11 704
2. Half Long Chantenay.. . . .	12 684	5. White Belgian (2nd sowing).. .	10 120
3. Early Gem.. . . .	11 1,892	6. Ontario Champion.. . . .	10 64

An average crop of 11 tons 924 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mammoth White Intermediate....	22 1,175	4. Ontario Champion (2nd sowing)...	25 1,480
2. Giant White Vorges... ..	31 1,630	5. White Belgian... ..	24 1,320
3. Improved Short White... ..	26 140	6. Carter's Orange Giant... ..	23 800

An average crop of 27 tons 863 lbs. per acre.

The crops from the two sowings of carrots at the experimental farms in 1903, have averaged as follows :—

	Tons.	Lbs.
Central Experimental Farm, first sowing....	26	247
“ “ second sowing... ..	20	50
Experimental Farm, Nappan, first sowing....	22	1,050
“ Nappan, second sowing... ..	20	63
“ Brandon, first sowing... ..	16	1,300
“ Brandon, second sowing... ..	10	1,520
“ Indian Head, first sowing... ..	9	1,562
“ Indian Head, second sowing... ..	10	131
“ Agassiz, first sowing... ..	23	1,805
“ Agassiz, second sowing... ..	22	370

The average crop from all the plots at all the farms was, from the first sowing, 19 tons 1,781 lbs., and from the second sowing, 16 tons 1,227 lbs.; showing an advantage in favour of the early sown plots of 3 tons 554 lbs. per acre.

SUGAR BEETS.

Eight varieties of sugar beets have been tested during 1903, sown in drills or on the flat two feet apart. Two sowings were made at each farm, the second sowing being about two weeks later than the first. The dates of sowing will be found in the accompanying table. The dates on which the roots were pulled were as follows :—At Agassiz, B.C., October 10 ; Nappan, N.S., October 22 ; Brandon, Man., September 21 ; Indian Head, N.W.T., October 9 ; and at Agassiz, B.C., October 23. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

Though all the varieties mentioned in the table are commonly classed as sugar beets it should be noted that the only sorts recommended for use in the manufacture of beet sugar are Wanzleben, Vilmorin's Improved, and French 'Very Rich.'

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF SUGAR BEETS FOR 1903.

Number.	Name of Variety.	AVERAGE OF ALL FARMS.		OTTAWA, ONT.		NAFFAX, N.S.		BRANDON, MAN.		ITHMAN HEAD, N.W.T.		AGASSIZ, B.C.	
		First Sowing.	Second Sowing.	Sown May 7.	Sown May 21.	Sown May 15.	Sown May 29.	Sown June 1.	Sown June 15.	Sown May 15.	Sown May 25.	Sown April 28.	Sown May 12.
		Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.	Per Acre. Tons. Lbs.
1	Red Top Sugar.....	28 1,594 23	636 36	105 20	920 29	575 19	445 24	312 30	920 25	1,550 22	1,144 26	1,420 28	1,750
2	Improved Imperial.....	28 1,347 25	88 39	540 21	900 28	595 18	1,030 23	1,836 21	504 26	860 23	1,034 26	860 26	300
3	Danish Red Top.....	28 1,834 21	369 35	455 16	1,495 31	40 21	1,865 25	160 19	1,600 24	1,866 22	1,144 27	120 26	100
4	Danish Improved.....	25 865 21	405 32	1,010 15	690 28	265 22	1,375 23	464 16	1,000 21	1,855 23	1,520 26	635 27	1,400
5	Royal Giant.....	26 120 22	741 20	1,250 15	1,185 37	415 30	390 19	1,090 21	504 26	864 18	825 26	470 26	800
6	Wanleben.....	22 1,709 18	280 29	1,565 13	70 24	1,005 30	425 20	138 15	380 21	866 21	1,856 18	900 20	500
7	Vilmorin's Improved.....	21 637 19	1,514 19	610 7	1,180 28	925 34	675 13	1,456 14	776 21	1,005 29	1,400 23	1,190 22	1,500
8	French 'Very Rich'.....	19 1,603 17	881 23	686 18	1,455 21	75 17	650 13	1,730 13	1,720 21	1,543 14	1,700 19	260 23	800

The four varieties of sugar beets which have given the heaviest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Red Top Sugar..	23 1,594	3. Danish Red Top..	23 1,334
2. Improved Imperial..	23 1,347	4. Danish Improved..	26 866

An average crop of 28 tons 285 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops at the several experimental farms during the season of 1903, are the following. (Unless otherwise stated, the yields given are all from the earliest sown plots) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Improved Imperial..	39 540	3. Danish Red Top..	35 455
2. Red Top Sugar..	36 105	4. Danish Improved..	32 1,010

An average crop of 35 tons 1,528 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Royal Giant..	37 415	3. Red Top Sugar..	29 575
2. Danish Red Top..	31 40	4. Vilmorin's Improved..	23 925

An average crop of 31 tons, 969 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top....	25 160	3. Danish Improved..	23 464
2. Red Top Sugar..	24 312	4. Improved Imperial..	22 1,936

An average crop of 23 tons 1,718 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Vilmorin's Improved (2nd sowing)	29 1,400	3. Royal Giant..	26 866
2. Improved Imperial (2nd sowing)..	28 1,024	4. Red Top Sugar..	25 1,559

An average crop of 27 tons 1,212 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Improved Imperial (2nd sowing)..	35 390	3. Danish Improved (2nd sowing) ..	27 1,440
2. Red Top Sugar (2nd sowing) .. .	28 1,750	4. Danish Red Top..	27 120

An average crop of 29 tons 1,425 lbs. per acre.

The crops from the two sowings of sugar beets at the experimental farms in 1903, have averaged as follows :—

	<i>Tons.</i>	<i>Lbs.</i>
Central Experimental Farm, first sowing.	29	1,029
“ “ second sowing	16	237
Experimental Farm, Nappan, first sowing.	28	987
“ Nappan, second sowing.	21	1,622
“ Brandon, first sowing.	20	722
“ Brandon, second sowing.	17	1,673
“ Indian Head, first sowing.	23	1,533
“ Indian Head, second sowing.	22	1,577
“ Agassiz, first sowing.	24	984
“ Agassiz, second sowing.	26	194

The average crop from all the plots at all the farms was, from the first sowing, 25 tons 651 lbs, and from the second sowing, 20 tons 1,861 lbs.; showing an advantage in favour of the first sowing of 4 tons 790 lbs. per acre.

POTATOES.

Fifty-five varieties of potatoes have been under test during 1903. The potatoes planted were cut into pieces with two or three eyes in each, and these were planted in rows 2½ feet apart, the sets being placed a foot apart in the rows. The following were the dates of planting and digging :—At Ottawa, Ont., planted May 22, dug October 5 and 6 ; at Nappan, N.S., planted May 22, dug September 25 ; at Brandon, Man., planted May 21, dug October 16 and 17 ; at Indian Head, N.W.T., planted May 14, dug October 5 ; and at Agassiz, B.C., planted May 19, dug September 22.

At the Central Experimental Farm the sets of some of the early varieties dried up in the ground from the excessive drought in spring. This accounts for the small yield reported this year in the case of some varieties which in past years have done well.

In Canada the bushel of potatoes is 60 lbs.

UNIFORM TEST PLOTS OF POTATOES FOR 1903.

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS.											
		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head N.W.T.		Agassiz, B.C.	
		Per Acre.		Per Acre.		Per Acre.		Per Acre.		Per Acre.		Per Acre.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.
1	Seedling No. 7.....	448	39	356	24	528	..	487	40	523	36	347	36
2	Vanier.....	441	54	353	36	550	..	425	20	514	21	376	12
3	Rose No. 9.	452	21	398	12	378	24	429	..	597	31	358	36
4	Rochester Rose.....	430	3	305	48	495	..	341	..	542	4	466	24
5	Carman No. 1.....	429	2	514	43	226	36	399	40	711	28	292	36
6	Enormous.....	426	13	363	..	506	..	509	40	508	12	244	12
7	Late Puritan.....	425	30	473	..	407	..	430	50	517	26	299	12
8	Burnaby Seedling. . . .	417	39	418	..	411	24	429	..	548	14	281	36
9	Everett.....	417	24	393	48	433	24	447	20	575	57	236	30
10	Uncle Sam.....	415	13	393	48	308	..	498	40	554	24	321	12
11	Canadian Beauty.....	409	47	451	..	312	24	469	20	585	12	231	..
12	Pearce.....	409	42	334	24	605	..	407	..	357	16	344	48
13	Penn. Manor.....	403	8	347	36	418	..	407	..	532	50	310	12
14	Dreer's Standard.....	402	29	534	36	259	36	414	20	490	28	323	24
15	Delaware.....	401	24	301	24	330	..	586	40	535	55	253	..
16	Swiss Snowflake.....	398	21	305	48	404	48	414	20	554	24	312	24
17	State of Maine.....	397	19	387	12	345	24	484	..	508	12	261	48
18	I X L.....	396	1	367	24	363	..	414	20	542	4	293	18
19	Cambridge Russet.....	390	50	369	36	231	..	465	40	428	7	459	48
20	Troy Seedling.....	390	8	374	..	429	..	377	40	492	48	277	12
21	Maule's Thoroughbred.....	389	13	266	12	374	..	440	..	551	19	314	36
22	Country Gentleman.....	389	6	347	36	228	48	447	20	523	36	358	12
23	McIntyre.....	386	31	253	..	517	..	388	40	498	57	275	..
24	Early Northern.....	385	..	310	12	365	12	462	..	508	12	279	24
25	Irish Daisy.....	379	4	288	12	294	48	484	..	483	33	344	48
26	Clay Rose.....	377	56	418	..	492	48	355	40	391	7	232	6
27	Irish Cobbler.....	375	44	338	48	358	36	447	20	443	31	290	24
28	Vick's Extra Early.....	373	42	299	12	534	36	315	20	477	24	242	..
29	American Wonder.....	371	48	169	24	248	36	495	..	585	12	360	48
30	Holborn Abundance.....	370	1	261	48	297	..	436	20	597	31	257	24
31	Sharpe's Seedling.....	364	54	193	36	341	..	425	20	508	12	356	24
32	Reeves' Rose.....	364	24	272	48	242	..	451	..	455	50	400	24
33	American Giant.....	362	11	411	24	235	24	414	20	560	33	189	12
34	Money Maker.....	358	29	396	..	272	48	490	20	403	28	239	48
35	Lee's Favourite.....	354	14	312	24	222	12	432	40	603	40	200	12
36	Brown's Rot Proof.....	348	11	305	48	286	..	447	20	385	..	316	48
37	General Gordon.....	347	38	180	24	222	12	630	40	511	16	193	36
38	Early Michigan.....	346	24	268	24	202	24	410	40	489	4	360	48
39	Early Puritan.....	346	17	189	12	367	24	462	..	446	36	266	12
40	Empire State.....	345	27	180	24	314	36	451	..	597	31	183	44
41	Prolific Rose.....	342	24	162	48	250	48	418	..	563	38	316	48
42	Early Sunrise.....	334	52	169	24	228	48	377	40	649	52	246	36
43	Green Mountain.....	334	49	259	36	308	..	451	..	369	36	285	54
44	Sabean's Elephant.....	333	1	330	..	301	24	366	40	455	50	211	12
45	Early Rose.....	332	35	209	..	253	..	335	30	489	43	375	40
46	Early St. George.....	322	31	121	..	231	..	330	..	631	24	299	12
47	Burpee's Extra Early ..	321	53	319	..	202	24	311	40	542	4	234	18
48	Rawdon Rose.....	318	18	202	24	198	..	440	..	434	16	316	48
49	Carman No. 3.....	305	46	253	..	270	36	381	20	428	7	195	48
50	Early Andes.....	303	4	33	..	310	12	363	..	575	57	233	12
51	Early Envoy.....	303	2	283	48	407	..	271	20	326	28	226	36
52	Early White Prize.....	295	9	57	12	264	..	418	..	468	9	268	24
53	Bovee.....	281	25	103	24	347	36	319	..	351	7	286	..
54	Up to Date.....	236	51	180	24	358	36	258	30	267	57	140	48
55	Fingree.....	203	29	37	24	325	36	113	40	357	16	..	..

* Not planted.

The twelve varieties of potatoes which have produced the largest crops in 1903, taking the average of the results obtained on all the experimental farms, are the following :—

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Seedling No. 7..	448 39	7. Late Puritan..	425 30
2. Vanier..	444 54	8. Burnaby Seedling..	417 39
3. Rose No. 9..	432 21	9. Everett..	417 24
4. Rochester Rose..	430 3	10. Uncle Sam..	415 13
5. Carman No. 1..	429 2	11. Canadian Beauty..	409 47
6. Enormous..	426 13	12. Pearce..	409 42

An average crop of 425 bushels 32 lbs per acre.

The twelve varieties of potatoes which have produced the largest crops at the several experimental farms during the season of 1903, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Dreer's Standard..	534 36	7. American Giant..	411 24
2. Carman No. 1..	514 48	8. Rose No. 9..	398 12
3. Late Puritan..	473 ..	9. Money Maker..	396 ..
4. Canadian Beauty..	461 ..	10. Uncle Sam..	393 48
5. Clay Rose..	418 ..	11. Everett..	393 48
6. Burnaby Seedling..	418 ..	12. State of Maine..	387 12

An average crop of 432 bushels 29 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Pearce..	605 ..	7. Rochester Rose..	495 ..
2. Vanier..	550 ..	8. Clay Rose..	492 48
3. Vick's Extra Early..	534 36	9. Everett..	433 24
4. Seedling No. 7..	528 ..	10. Troy Seedling..	429 ..
5. McIntyre ..	517 ..	11. Penn Manor..	418 ..
6. Enormous..	506 ..	12. Burnaby Seedling..	411 24

An average crop of 493 bushels 21 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. General Gordon..	630 40	7. Irish Daisy..	484 ..
2. Delaware..	586 40	8. State of Maine..	484 ..
3. Enormous..	509 40	9. Money Maker..	480 20
4. Uncle Sam..	498 40	10. Canadian Beauty..	469 20
5. American Wonder..	495 ..	11. Cambridge Russet..	465 40
6. Seedling No. 7..	487 40	12. Early Puritan..	462 ..

An average crop of 504 bushels 28 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Garman No. 1	711 28	7. Empire State.. . . .	597 31
2. Early Sunrise.. . . .	649 23	8. American Wonder.. . . .	585 13
3. Early St. George.. . . .	631 24	9. Canadian Beauty.. . . .	585 12
4. Lee's Favourite.. . . .	603 40	10. Early Andes.. . . .	575 57
5. Holborn Abundance.. . . .	597 31	11. Everett.. . . .	575 57
6. Rose No. 9.. . . .	597 31	12. Prolific Rose.. . . .	563 38

An average crop of 606 bushels 14 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Rochester Rose.. . . .	466 24	7. American Wonder.. . . .	360 48
2. Cambridge Russet.. . . .	459 48	8. Early ?	360 48
3. Reeves' Rose.. . . .	400 24	9. Rose No. 9.. . . .	358 36
4. Country Gentleman.. . . .	398 12	10. Sharpe's Seedling.. . . .	356 24
5. Vanier.. . . .	376 12	11. Seedling No. 7.. . . .	347 36
6. Early Rose.. . . .	375 40	12. Irish Daisy.... . . .	344 48

An average crop of 383 bushels 48 lbs. per acre.

The average crops of all the varieties of potatoes tested in 1903, at each of the experimental farms, were as follows :—At Ottawa, 293 bushels 19 lbs. per acre ; at Nappan, 338 bushels 5 lbs. per acre ; at Brandon, 415 bushels 50 lbs. per acre ; at Indian Head, 500 bushels 48 lbs. per acre ; and at Agassiz, 289 bushels 29 lbs. per acre.

The average return given by the whole of the varieties at all the farms was 365 bushels 30 lbs. per acre.

AVERAGE OF CROPS ON THE EXPERIMENTAL PLOTS FOR A SERIES OF YEARS.

The results of experiments with different varieties of agricultural crops to ascertain their relative productiveness become much more reliable and conclusive when the average experience of a series of years can be given. In this way variations arising from inequality of soil and variability of season are to a large extent equalized, and the conclusions reached become a more valuable guide to the farmer in selecting his seed. The experience here recorded with the varieties under test covers a period of from four to nine years.

TEST OF VARIETIES OF OATS FOR A SERIES OF YEARS.

The twelve varieties of oats which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the bushel of oats is 34 lbs.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Danish Island, 6 yrs..	79	3	7. Thousand Dollar, 5 yrs..	75	22
2. Banner, 9 yrs..	78	25	8. Black Beauty, 5 yrs..	75	14
3. Mennonite, 8 yrs..	77	3	9. Holstein Prolific, 9 yrs..	75	13
4. New Zealand, 5 yrs..	76	23	10. Improved American, 6 yrs..	75	12
5. American Beauty, 8 yrs..	75	29	11. Buckbee's Illinois, 8 yrs..	74	18
6. White Giant, 6 yrs..	75	27	12. Golden Tartarian, 7 yrs..	74	13

An average crop for the twelve varieties of 76 bushels 6 lbs. per acre.

The twelve varieties of oats which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. White Giant, 6 yrs..	60	2	7. Holstein Prolific, 9 yrs..	63	21
2. Banner, 9 yrs..	63	6	8. Golden Beauty, 9 yrs..	63	23
3. Mennonite, 8 yrs..	65	19	9. Joannette, 9 yrs..	63	8
4. American Triumph, 9 yrs..	64	23	10. Abundance, 9 yrs..	61	21
5. Columbus, 9 yrs..	64	19	11. Improved Ligowo, 9 yrs..	61	30
6. Golden Giant, 9 yrs..	64	8	12. American Beauty, 9 yrs..	61	30

An average crop for the twelve varieties of 64 bushels 16 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAW, N.S.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Salines, 5 yrs..	80 24	7. Wallis, 9 yrs..	76 21
2. Siberian, 7 yrs..	79 17	8. New Zealand, 5 yrs..	76 16
3. Mennonite, 8 yrs..	78 10	9. White Giant, 6 yrs..	76 8
4. Thousand Dollar, 5 yrs..	78 4	10. Lincoln, 9 yrs..	75 25
5. Black Beauty, 5 yrs..	78 4	11. White Schonen, 9 yrs..	74 25
6. Danish Island, 6 yrs..	77 19	12. Banner, 9 yrs..	74 13

An average crop for the twelve varieties of 77 bushels 7 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Buckbee's Illinois, 6 yrs..	92 4	7. Early Golden Prolific, 8 yrs..	88 13
2. American Beauty, 8 yrs..	91 16	8. Bavarian, 8 yrs..	87 22
3. Danish Island, 5 yrs..	90 6	9. Golden Tartarian, 6 yrs..	86 33
4. Mennonite, 7 yrs..	90 ..	10. Improved American, 5 yrs..	86 23
5. Banner, 8 yrs..	88 29	11. Holstein Prolific, 8 yrs..	86 7
6. White Giant, 5 yrs..	88 24	12. Golden Giant, 8 yrs..	84 28

An average crop for the twelve varieties of 88 bushels 18 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Abundance, 8 yrs..	97 ..	7. American Beauty, 8 yrs..	94 15
2. Improved American, 7 yrs..	96 13	8. Wide Awake, 8 yrs..	94 13
3. Danish Island, 5 yrs..	96 10	9. Columbus, 8 yrs..	94 10
4. Thousand Dollar, 5 yrs..	95 22	10. Golden Beauty, 8 yrs..	92 19
5. Holstein Prolific, 8 yrs..	95 19	11. Black Beauty, 8 yrs..	92 8
6. Banner, 8 yrs..	94 30	12. Buckbee's Illinois, 6 yrs..	90 21

An average crop for the twelve varieties of 94 bushels 18 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Black Beauty, 6 yrs..	73 33	7. Banner, 9 yrs..	65 30
2. Danish Island, 6 yrs..	73 23	8. White Giant, 6 yrs..	65 20
3. Golden Tartarian, 7 yrs..	72 5	9. Lincoln, 9 yrs..	64 33
4. Golden Giant, 7 yrs..	68 26	10. Mennonite, 8 yrs..	63 17
5. Salines, 5 yrs..	68 14	11. Buckbee's Illinois, 8 yrs..	63 8
6. New Zealand, 5 yrs..	67 9	12. Bavarian, 9 yrs..	62 27

An average crop for the twelve varieties of 67 bushels 17 lbs. per acre.

TEST OF VARIETIES OF BARLEY FOR A SERIES OF YEARS.

TWO-ROWED BARLEY.

The six varieties of two-rowed barley which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the bushel of barley is 48 lbs.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. French Chevalier, 9 yrs..	47	8	4. Danish Chevalier, 9 yrs..	45	17
2. Dunham, 6 yrs..	45	47	5. Clifford, 5 yrs..	44	44
3. Canadian Thorpe, 9 yrs..	45	17	6. Beaver, 9 yrs..	44	44

An average crop for the six varieties of 45 bushels 29 lbs per acre.

The six varieties of two-rowed barley which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Canadian Thorpe, 9 yrs..	46	36	4. Danish Chevalier, 9 yrs..	45	23
2. French Chevalier, 9 yrs..	45	45	5. Clifford, 5 yrs..	43	46
3. Beaver, 9 yrs..	45	44	6. Dunham, 6 yrs..	43	38

An average crop for the six varieties of 45 bushels 14 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Danish Chevalier, 9 yrs.	45	26	4. Newton, 9 yrs.	44	34
2. Beaver, 9 yrs.	46	21	5. Canadian Thorpe, 9 yrs.	43	47
3. French Chevalier, 9 yrs.	45	23	6. Harvey, 5 yrs.	43	15

An average crop for the six varieties of 45 bushels 4 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Dunham, 4 yrs..	52	7	4. Sidney, 7 yrs..	44	37
2. Logan, 4 yrs..	48	41	5. French Chevalier, 7 yrs..	43	40
3. Harvey, 4 yrs..	45	..	6. Newton, 7 yrs..	41	15

An average crop for the six varieties of 45 bushels 47 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. French Chevalier, 9 yrs.	59	12	4. Sidney, 7 yrs.	55	40
2. Danish Chevalier, 9 yrs.	52	23	5. Jarvis, 5 yrs.	55	25
3. Canadian Thorpe, 9 yrs.	54	1	6. Clifford, 5 yrs.	54	..

An average crop for the six varieties of 56 bushels 13 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre.			Per acre.	
	Bush. Lbs.			Bush. Lbs.	
1. Dunham, 6 yrs.	45	25	4. Canadian Thorpe, 9 yrs.	42	22
2. Harvey, 5 yrs.	45	10	5. Beaver, 9 yrs.	41	26
3. Jarvis, 5 yrs.	43	23	6. French Chevalier, 9 yrs.	41	15

An average crop for the six varieties of 43 bushels 16 lbs. per acre.

SIX-ROWED BARLEY.

The six varieties of six-rowed barley which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Mensury, 9 yrs..	52	45	4. Yale, 5 yrs..	50	23
2. Claude, 5 yrs..	51	5	5. Odessa, 9 yrs..	50	13
3. Mansfield, 5 yrs..	51	3	6. Brome, 5 yrs..	49	8

An average crop for the six varieties of 50 bushels 43 lbs. per acre.

The six varieties of six-rowed barley which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa, 9 yrs..	53	29	4. Brome, 5 yrs..	49	8
2. Mensury, 9 yrs..	52	9	5. Stella, 9 yrs..	48	22
3. Royal, 8 yrs..	49	3	6. Trooper, 9 yrs..	48	5

An average crop for the six varieties of 50 bushels 7 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury, 9 yrs..	53	6	4. Garfield, 5 yrs..	50	24
2. Yale, 5 yrs..	52	3	5. Oderbruch, 9 yrs..	43	24
3. Albert, 5 yrs..	51	22	6. Odessa, 9 yrs..	43	..

An average crop for the six varieties of 50 bushels 33 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. Mansfield, 4 yrs	53	40	4. Argyle, 4 yrs	54	23
2. Yale, 4 yrs	56	39	5. Nugent, 7 yrs	53	29
3. Mensury, 7 yrs	56	26	6. Common, 7 yrs	53	3

An average crop for the six varieties of 56 bushels per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per acre Bush. Lbs.			Per acre. Bush. Lbs.
1. Claude, 4 yrs	66	47	4. Rennie's Improved, 8 yrs ..	53	20
2. Odessa, 8 yrs	63	4	5. Trooper, 8 yrs	57	46
3. Mensury, 8 yrs	59	12	6. Mansfield, 5 yrs	57	30

An average crop for the six varieties of 60 bushels 26 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.
1. Claude, 5 yrs	47	..	4. Brome, 5 yrs	45	28
2. Albert, 5 yrs	46	30	5. Mansfield, 6 yrs	45	27
3. Yale, 5 yrs	45	40	6. Argyle, 6 yrs	44	43

An average crop for the six varieties of 45 bushels 44 lbs. per acre.

TEST OF VARIETIES OF SPRING WHEAT FOR A SERIES OF YEARS.

The twelve varieties of spring wheat which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the bushel of wheat is 60 lbs.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Roumanian, 5 yrs..	33	7. Wellman's Fife, 9 yrs.	33
2. Clyde, 5 yrs..	35	8. Rio Grande, 9 yrs..	33
3. Laurel, 5 yrs..	34	9. White Fife, 9 yrs..	33
4. Preston, 9 yrs..	34	10. Huron, 9 yrs..	33
5. Goose, 9 yrs..	34	11. Red Fife, 9 yrs..	33
6. Monarch, 8 yrs..	33	12. Weldon, 5 yrs..	33

An average crop for the twelve varieties of 34 bushels 20 lbs. per acre.

The twelve varieties of spring wheat which have averaged the largest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Roumanian, 5 yrs..	30	7. Hungarian, 8 yrs..	27
2. Preston, 9 yrs..	30	8. Pringle's Champlain, 9 yrs..	27
3. Laurel, 5 yrs..	28	9. Plumper, 6 yrs..	27
4. Clyde, 5 yrs..	28	10. Rio Grande, 9 yrs..	28
5. Huron, 9 yrs..	28	11. Monarch, 9 yrs..	28
6. Wellman's Fife, 9 yrs..	27	12. Colorado, 9 yrs..	28

An average crop for the twelve varieties of 28 bushels 1 lb. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPA, N.S.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Norval, 5 yrs..	39	7. Wellman's Fife, 9 yrs..	35
2. Laurel, 5 yrs..	39	8. Early Riga, 5 yrs..	35
3. Roumanian, 5 yrs..	39	9. Monarch, 8 yrs..	35
4. Clyde, 5 yrs..	38	10. White Connell, 9 yrs..	35
5. Byron, 5 yrs..	37	11. Rio Grande, 9 yrs..	35
6. Red Swedish, 5 yrs..	35	12. Weldon, 5 yrs..	34

An average crop for the twelve varieties of 36 bushels 55 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Roumanian, 4 yrs..	45	15	7.	Laurel, 4 yrs..	34	25
2.	Goose, 8 yrs..	41	59	8.	White Russian, 8 yrs..	23	39
3.	White Fife, 8 yrs..	34	36	9.	White Connell, 8 yrs..	23	47
4.	Crow, 8 yrs..	35	30	10.	Rio Grande, 8 yrs..	23	24
5.	Monarch, 8 yrs..	25	17	11.	Clyde, 4 yrs..	23	20
6.	Red Fife, 8 yrs..	34	44	12.	Wellman's Fife, 8 yrs..	23	6

An average crop for the twelve varieties of 35 bushels 57 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Roumanian, 4 yrs..	44	55	7. Stanley, 8 yrs..	41	41
2. Preston, 8 yrs..	43	31	8. Red Fife, 8 yrs..	41	33
3. Huron, 8 yrs..	43	16	9. Wellman's Fife, 8 yrs..	41	31
4. Weldon, 4 yrs..	42	40	10. Pringle's Champlain, 8 yrs..	41	25
5. Red Fern, 8 yrs..	42	20	11. Hungarian, 7 yrs..	40	45
6. Percy, 8 yrs..	41	59	12. Rio Grande, 8 yrs..	40	41

An average crop for the twelve varieties of 42 bushels 11 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Roumanian, 5 yrs..	37	23	7. Plumper, 6 yrs..	34	32
2. Red Swedish, 5 yrs..	36	15	8. Fraser, 5 yrs..	34	29
3. Clyde, 5 yrs..	36	2	9. Crawford, 5 yrs..	34	18
4. Blair, 6 yrs..	35	23	10. Colorado, 7 yrs..	33	54
5. Early Riga, 5 yrs..	25	19	11. White Russian, 7 yrs..	33	34
6. Laurel, 5 yrs..	24	59	12. Preston, 8 yrs..	32	49

An average crop for the twelve varieties of 34 bushels 56 lbs. per acre.

TEST OF VARIETIES OF PEASE FOR A SERIES OF YEARS.

The twelve varieties of pease which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the bushel of peas is 60 lbs.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Crown, 8 yrs..	37 23	7. Carleton, 7 yrs..	35 22
2. Pride, 8 yrs..	36 41	8. Pictou, 6 yrs..	35 10
3. English Grey, 6 yrs..	36 37	9. King, 7 yrs..	35 2
4. Early Britain, 7 yrs..	36 25	10. Arthur, 8 yrs..	34 59
5. German White, 6 yrs..	35 39	11. Paragon, 8 yrs..	34 50
6. Pearl, 5 yrs..	35 25	12. Agnes, 7 yrs..	34 42

An average crop for the twelve varieties of 35 bushels 41 lbs. per acre.

The twelve varieties of pease which have averaged the largest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Arthur, 8 yrs..	36 37	7. Crown, 8 yrs..	33 15
2. Paragon, 8 yrs..	35 29	8. English Grey, 4 yrs..	33 3
3. Kent, 7 yrs..	34 53	9. Mackay, 8 yrs..	32 37
4. Duke, 7 yrs..	33 49	10. Macoun, 7 yrs..	32 25
5. Prussian Blue, 9 yrs..	33 29	11. Pearl, 5 yrs..	32 22
6. Golden Vine, 7 yrs..	33 24	12. Mummy, 8 yrs..	32 17

An average crop for the twelve varieties of 33 bushels 38 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Crown, 8 yrs..	33 25	7. Nelson, 6 yrs..	31 20
2. Pride, 7 yrs..	34 9	8. New Potter, 8 yrs..	31 12
3. Agnes, 7 yrs..	32 14	9. Blk-eyed Marrowfat, 8 yrs..	30 44
4. Archer, 6 yrs..	31 57	10. English Grey, 5 yrs..	30 39
5. Centennial, 8 yrs..	31 46	11. Chancellor, 6 yrs..	30 8
6. Early Britain, 6 yrs..	31 28	12. Carleton, 7 yrs..	29 27

An average crop for the twelve varieties of 31 bushels 57 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Pride, 8 yrs..	46	7. King, 6 yrs..	43 13
2. Mummy, 8 yrs..	44	8. Trilby, 7 yrs..	43 13
3. German White, 5 yrs..	44	9. Pearl, 4 yrs..	42 32
4. White Wonder, 6 yrs..	43	10. Alma, 6 yrs..	42 27
5. Crown, 7 yrs..	42	11. Victoria, 6 yrs..	42 6
6. Carleton, 7 yrs..	42	12. Archer, 6 yrs..	42 ..

An average crop for the twelve varieties of 43 bushels 22 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Paragon, 7 yrs..	44	7. Picton, 5 yrs..	40 57
2. Gregory, 6 yrs..	43	8. Pride, 7 yrs..	40 19
3. English Grey, 4 yrs..	42	9. German White, 5 yrs..	40 18
4. Crown, 7 yrs..	42	10. Bruce, 4 yrs..	40 12
5. Early Britain, 6 yrs.,	41	11. Wisconsin Blue, 4 yrs..	40 8
6. Carleton, 7 yrs..	41	12. Macoun, 7 yrs..	40 8

An average crop for the twelve varieties of 41 bushels 30 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. German White, 6 yrs..	38	7. English Grey, 5 yrs..	37 31
2. White Wonder, 7 yrs..	38	8. King, 6 yrs..	37 23
3. Bruce, 5 yrs..	38	9. Lanark, 6 yrs..	37 15
4. Pearl, 5 yrs..	38	10. Picton, 6 yrs..	36 57
5. Fergus, 5 yrs..	37	11. Gregory, 6 yrs..	36 55
6. Early Britain, 7 yrs..	37	12. Arthur, 8 yrs..	35 54

An average crop for the twelve varieties of 37 bushels 33 lbs. per acre.

TEST OF VARIETIES OF INDIAN CORN FOR A SERIES OF YEARS.

The six varieties of Indian corn which have produced the heaviest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

		Per acre.		Per acre.
		Tons. Lbs.		Tons. Lbs.
1. Early Mastodon, 6 yrs..	20	753	4. Salzer's All Gold, 4 yrs..	19 836
2. Superior Fodder, 4 yrs..	19	1,561	5. Red Cob Ensilage, 9 yrs..	19 103
3. Thoroughbred White Flint..	19	934	6. Early Butler, 7 yrs..	18 1,018

An average crop for the six varieties cut green for ensilage of 19 tons 867 lbs. per acre.

The six varieties of Indian corn which have averaged the heaviest crops at the several experimental farms for a series of years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre.		Per acre.
		Tons. Lbs.		Tons. Lbs.
1. Early Mastodon, 6 yrs..	23	1,309	4. Red Cob Ensilage, 9 yrs..	23 600
2. Giant Prolific Ensilage, 9 yrs..	23	1,163	5. Selected Leaming, 8 yrs..	23 1,010
3. Thoroughbred White Flint, 9 yrs.	23	1,012	6. Superior Fodder, 4 yrs..	23 640

An average crop for the six varieties cut green for ensilage of 23 tons 289 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

		Per acre.		Per acre.
		Tons. Lbs.		Tons. Lbs.
1. Early Mastodon, 6 yrs..	20	1,925	4. Thoroughbred White Flint, 9 yrs.	18 616
2. Superior Fodder, 4 yrs..	20	827	5. Red Cob Ensilage, 9 yrs..	17 453
3. Salzer's All Gold, 4 yrs..	18	950	6. Mammoth Cuban, 6 yrs..	17 1,603

An average crop for the six varieties cut green for ensilage, of 18 tons 1,731 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.		Per acre.
	Tons. Lbs.		Tons. Lbs.
1. Thoroughbred White Flint, 9 yrs.	21 1,179	4. Champion White Pearl, 9 yrs....	19 541
2. Early Mastodon, 6 yrs.. . . .	20 165	5. Longfellow, 9 yrs.. . . .	18 1,772
3. Angel of Midnight, 9 yrs.. . . .	19 635	6. Superior Fodder, 4 yrs.. . . .	18 1,323

An average crop for the six varieties cut green for ensilage, of 19 tons 1,267 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre.		Per acre.
	Tons. Lbs.		Tons. Lbs.
1. Salzer's All Gold, 4 yrs.. . . .	17 1,493	4. Early Butler, 7 yrs.. . . .	13 1,694
2. Superior Fodder, 4 yrs.. . . .	14 1,876	5. Angel of Midnight, 9 yrs.. . . .	13 1,260
3. Early Mastodon, 6 yrs.. . . .	14 74	6. Giant Prolific Ensilage, 9 yrs.....	13 837

An average crop for the six varieties cut green for ensilage of 14 tons 1,206 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre.		Per acre.
	Tons. Lbs.		Tons. Lbs.
1. Red Cob Ensilage.. . . .	24 966	4. Superior Fodder.. . . .	22 1,127
2. Early Butler.. . . .	23 1,163	5. Pride of the North.. . . .	21 1,958
3. Early Mastodon.. . . .	23 292	6. Mammoth Cuban.. . . .	21 1,483

An average crop for the six varieties cut green for ensilage of 22 tons 1,831 lbs. per acre.

TEST OF VARIETIES OF TURNIPS FOR A SERIES OF YEARS.

The six varieties of turnips which have produced the heaviest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Perfection Swede, 8 yrs.. . . .	32 263	4. Selected Purple Top, 8 yrs.. . . .	31 486
2. Imperial Swede, 5 yrs.. . . .	32 107	5. Magnum Bonum, 4 yrs.. . . .	31 75
3. Halewood's Bronze Top, 7 yrs.. . . .	31 533	6. Hall's Westbury, 7 yrs.. . . .	31 72

An average crop for the six varieties of 31 tons 927 lbs. per acre.

The six varieties of turnips which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Kangaroo, 4 yrs.. . . .	36 1,590	4. Drummond Purple Top, 6 yrs....	35 1,445
2. Magnum Bonum, 4 yrs.. . . .	36 1,056	5. Selected Purple Top, 8 yrs.. . .	35 1,148
3. Elephant's Master, 4 yrs.. . . .	36 95	6. Carter's Elephant, 9 yrs.. . . .	35 583

An average crop for the six varieties of 34 tons 486 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Kangaroo, 4 yrs.. . . .	41 1,407	4. Magnum Bonum, 4 yrs.. . . .	40 107
2. Elephant's Master, 4 yrs.. . . .	41 789	5. Perfection Swede, 8 yrs.. . . .	38 411
3. Imperial Swede, 5 yrs.. . . .	40 573	6. Halewood's Bronze Top, 7 yrs.. . .	38 65

An average crop for the six varieties of 39 tons 1,892 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Hartley's Bronze, 8 yrs.. . . .	36 721	4. Skirvings, 9 yrs.. . . .	24 1,901
2. Magnum Bonum, 4 yrs.. . . .	35 94	5. Selected Purple Top, 8 yrs.. . .	24 1,573
3. Perfection Swede, 8 yrs.. . . .	35 11	6. Hall's Westbury, 7 yrs.. . . .	24 1,479

An average crop for the six varieties of 25 tons 295 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Perfection Swede, 8 yrs.. .. .	23 57	4. Halewood's Bronze Top, 7 yrs..	22 556
2. Imperial Swede, 5 yrs.. .. .	22 1,370	5. Hall's Westbury, 7 yrs.. .. .	21 1,916
3. Hartley's Bronze, 8 yrs.. .. .	22 1,145	6. Drummond Purple Top, 6 yrs....	21 1,311

An average crop for the six varieties of 22 tons 709 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Bangholm Selected, 7 yrs.. .. .	41 525	4. Hall's Westbury, 7 yrs.. .. .	39 512
2. Perfection Swede, 8 yrs.. .. .	40 653	5. Selected Purple Top, 8 yrs.. .. .	39 457
3. Halewood's Bronze Top, 7 yrs....	39 1,052	6. Imperial Swede, 5 yrs.. .. .	28 1,764

An average crop for the six varieties of 39 tons 1,484 lbs. per acre.

TEST OF VARIETIES OF MANGELS FOR A SERIES OF YEARS.

The six varieties of mangels which have produced the heaviest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Giant Yellow Intermediate, 8 yrs.	32 454	4. Mammoth Long Red, 8 yrs.. ..	31 1,330
2. Yellow Intermediate, 8 yrs.. ..	32 238	5. Mam. Yellow Intermediate, 6 yrs	31 777
3. Lion Yellow Intermediate, 5 yrs..	31 1,972	6. Gate Post, 8 yrs.. .. .	31 314

An average crop for the six varieties of 31 tons 1,514 lbs. per acre.

The six varieties of mangels which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Prize Winner Yellow Globe, 4 yrs.	40 1,716	4. Half Long Sugar White, 4 yrs....	39 86
2. Mammoth Long Red, 8 yrs..	39 1,551	5. Lion Yellow Intermediate, 5 yrs..	38 407
3. Gate Post, 8 yrs.. .. .	39 422	6. Half Long Sugar Rosy, 4 yrs...	37 781

An average crop for the six varieties of 39 tons 160 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Prize Winner Yellow Globe, 4 yrs.	40 1,469	4. Giant Yellow Intermediate, 8 yrs.	36 1,965
2. Lion Yellow Intermediate, 5 yrs...	40 453	5. Half Long Sugar White, 4 yrs....	35 1,857
3. Mam. Yellow Intermediate, 6 yrs.	38 597	6. Half Long Sugar Rosy, 4 yrs.. ..	35 1,775

An average crop for the six varieties of 38 tons 19 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Selected Mamm. Long Red, 7 yrs.	32 1,899	4. Prize Mamm. Long Red, 8 yrs....	30 1,215
2. Mamm. Long Red, 8 yrs.. .. .	31 823	5. Giant Yellow Intermediate, 8 yrs.	30 893
3. Yellow Intermediate, 8 yrs.. .. .	31 669	6. Gate Post, 8 yrs.	30 17

An average crop for the six varieties of 31 tons 253 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.			Per acre.		
Tons. Lbs.			Tons. Lbs.		
1. Prize Winner Yellow Globe, 4 yrs	22	399	4. Selected Mamm. Long Red, 7 yrs.	22	1,003
2. Lion Yellow Intermediate, 5 yrs.	22	321	5. Gate Post, 8 yrs.	22	309
3. Yellow Intermediate, 8 yrs.	22	1,219	6. Giant Yellow Intermediate, 8 yrs.	22	51

An average crop for the six varieties of 22 tons 1,219 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.			Per acre.		
Tons. Lbs.			Tons. Lbs.		
1. Giant Yellow Intermediate, 8 yrs.	35	213	4. Mammoth Long Red, 8 yrs.	34	703
2. Lion Yellow Intermediate, 5 yrs.	34	1,940	5. Selected Mamm. Long Red, 7 yrs.	33	1,476
3. Yellow Intermediate, 8 yrs.	34	1,800	6. Mamm. Yellow Intermediate, 5 yrs.	33	587

An average crop for the six varieties of 34 tons 787 lbs. per acre.

TEST OF VARIETIES OF CARROTS FOR A SERIES OF YEARS.

The six varieties of carrots which have produced the heaviest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 5 yrs..	23 1,257	4. Mamm. White Intermediate, 8 yrs	21 1,177
2. Giant White Vosges, 8 yrs.. ..	22 762	5. Improved Short White, 8 yrs....	21 1,135
3. Ontario Champion, 6 yrs.. .. .	21 1,659	6. Half Long White, 8 yrs.. .. .	21 517

An average crop for the six varieties of 22 tons 84 lbs. per acre.

The six varieties of carrots which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 5 yrs..	25 653	4. Improved Short White, 8 yrs....	29 1,207
2. Giant White Vosges, 8 yrs.. ..	20 1,446	5. Half Long White, 8 yrs.. .. .	29 230
3. Mamm. White Intermediate, 8 yrs	20 1,442	6. Ontario Champion, 6 yrs.. .. .	28 1,420

An average crop for the six varieties of 30 tons 1,400 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 5 yrs..	24 11	4. Giant White Vosges, 8 yrs..	23 1,058
2. Ontario Champion, 6 yrs.. .. .	22 1,865	5. Half Long White, 8 yrs.. .. .	21 851
3. Mamm. White Intermediate, 8 yrs	22 1,537	6. Long Yellow Stump Rooted, 4 yrs	20 1,291

An average crop for the six varieties of 22 tons 742 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 5 yrs..	15 1,768	4. Giant White Vosges, 8 yrs	13 1,267
2. Ontario Champion, 6 yrs.. .. .	14 1,920	5. Half Long White, 8 yrs.. .. .	13 1,267
3. Long Yellow Stump-rooted, 4 yrs	13 1,225	6. Mamm. White Intermediate, 8 yrs	13 1,211

An average crop for the six varieties of 14 tons 750 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per acre.		Per acre.
		Tons. Lbs.		Tons. Lbs.
1. New White Intermediate, 4 yrs..	14	68	4. Half Long White, 8 yrs..	11 1,405
2. Ontario Champion, 6 yrs..	12	1,460	5. Improved Short White, 7 yrs....	11 1,343
3. Long Yellow Stump-rooted, 4 yrs	12	831	6. Giant White Vosges, 7 yrs..	11 183

An average crop for the six varieties of 12 tons 566 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per acre.		Per acre.
		Tons. Lbs.		Tons. Lbs.
1. Giant White Vosges, 8 yrs..	33	1,259	4. Half Long White, 8 yrs..	30 240
2. Improved Short White, 8 yrs....	33	834	5. Ontario Champion, 6 yrs..	39 1,840
3. Mamm. White Intermediate, 8 yrs	30	849	6. White Belgian, 8 yrs..	29 663

An average crop for the six varieties of 31 tons 282 lbs. per acre.

TEST OF VARIETIES OF SUGAR BEETS FOR A SERIES OF YEARS.

The four varieties of sugar beets which have produced the heaviest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 6 yrs.. . . .	26 556	3. Red Top Sugar, 7 yrs.. . . .	24 19
2. Danish Improved, 7 yrs.. . . .	24 84	4. Improved Imperial, 7 yrs.. . . .	23 1,063

An average crop for the four varieties of 24 tons 932 lbs. per acre.

The four varieties of sugar beets which have averaged the heaviest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Improved, 7 yrs.. . . .	29 765	3. Danish Red Top, 6 yrs.. . . .	28 1,860
2. Improved Imperial, 7 yrs.. . . .	29 10	4. Red Top Sugar, 7 yrs.. . . .	27 1,935

An average crop for the four varieties of 28 tons 1,650 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Red Top Sugar, 7 yrs.. . . .	23 387	3. Improved Imperial, 7 yrs.. . . .	26 1,694
2. Danish Red Top, 6 yrs.. . . .	27 1,919	4. Danish Improved, 7 yrs.. . . .	26 55

An average crop for the four varieties of 27 tons 514 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 6 yrs.. . . .	27 901	3. Red Top Sugar, 7 yrs.. . . .	23 639
2. Danish Improved, 7 yrs.. . . .	24 699	4. Wansleben, 7 yrs.. . . .	22 1,021

An average crop for the four varieties of 19 tons 815 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Danish Red Top, 6 yrs..	18	999	2. Improved Imperial, 7 yrs..	16	727
2. Red Top Sugar, 7 yrs..	16	1,827	4. Danish Improved, 7 yrs..	15	1,468

An average crop for the four varieties of 11 tons 503 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Danish Red Top, 5 yrs..	28	1,103	2. Danish Improved, 6 yrs..	24	1,402
2. Improved Imperial, 6 yrs..	25	162	4. Red Top Sugar, 6 yrs..	23	1,306

An average crop for the four varieties of 16 tons 1,995 lbs. per acre.

TEST OF VARIETIES OF POTATOES FOR A SERIES OF YEARS.

The twelve varieties of potatoes which have produced the largest crops for a series of years, taking the average of the results obtained on all the experimental farms, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the bushel of potatoes is 60 lbs.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Uncle Sam, 4 yrs..	395	20	7.	Late Puritan, 9 yrs..	374	48
2.	Seedling No 7, 7 yrs..	393	33	8.	Country Gentleman, 5 yrs..	373	59
3.	Irish Daisy, 8 yrs..	386	25	9.	Carman No 1, 9 yrs..	373	47
4.	American Wonder, 9 yrs..	381	42	10.	Burnaby Seedling, 8 yrs..	371	23
5.	Rose No. 9, 7 yrs..	378	22	11.	Penn Manor, 5 yrs..	364	58
6.	American Giant, 8 yrs..	377	6	12.	State of Maine, 9 yrs..	363	13

An average crop for the twelve varieties of 377 bushels 53 lbs. per acre.

The twelve varieties of potatoes which have averaged the largest crops at the several experimental farms for a series of years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre. *				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Late Puritan, 9 yrs.	436	32	7.	Carman No. 1, 9 yrs.	398	4
2.	Holborn Abundance, 9 yrs.	408	10	8.	Burnaby Seedling, 8 yrs.	394	44
3.	American Wonder, 9 yrs.	401	23	9.	Country Gentleman, 5 yrs.	392	2
4.	Uncle Sam, 4 yrs.	401	8	10.	Rose No. 9, 7 yrs.	390	29
5.	Dreer's Standard, 9 yrs.	398	50	11.	Money Maker, 9 yrs.	386	36
6.	Penn. Manor, 5 yrs.	392	38	12.	State of Maine, 9 yrs.	379	48

An average crop for the twelve varieties of 399 bushels 13 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Irish Daisy, 8 yrs..	420	35	7. Troy Seedling, 9 yrs..	383	42
2. Holborn Abundance, 9 yrs..	408	18	8. American Giant, 8 yrs..	375	45
3. Seedling, No. 7, 7 yrs..	406	..	9. Penn. Manor, 5 yrs..	374	..
4. Vanier, 8 yrs..	400	15	10. Burnaby Seedling, 8 yrs..	371	45
5. Irish Cobbler, 7 yrs..	388	62	11. Vick's Extra Early, 8 yrs..	368	47
6. Clay Rose, 9 yrs..	387	41	12. Everett, 9 yrs..	366	40

An average crop for the twelve varieties of 387 bushels 42 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Delaware, 8 yrs.	422 13	7. Empire State, 8 yrs.	385 22
2. Seedling No. 7, 7 yrs.	417 20	8. Burnaby Seedling, 8 yrs.	383 32
3. Maule's Thoroughbred, 6 yrs.	412 30	9. Uncle Sam, 4 yrs.	381 57
4. American Wonder, 9 yrs.	404 54	10. Reeve's Rose, 7 yrs.	380 17
5. Irish Daisy, 8 yrs.	400 35	11. I. X. L., 9 yrs.	378 53
6. State of Maine, 9 yrs.	399 3	12. Late Puritan, 9 yrs.	377 53

An average crop for the twelve varieties of 395 bushels 23 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. American Giant, 8 yrs.	474 28	7. Carman No. 1, 9 yrs.	427 32
2. Uncle Sam, 4 yrs.	467 7	8. Lee's Favourite, 8 yrs.	420 47
3. Country Gentleman, 6 yrs.	457 40	9. Rochester Rose, 8 yrs.	419 37
4. American Wonder, 9 yrs.	446 30	10. General Gordon, 7 yrs.	415 45
5. Carman No. 3, 7 yrs.	438 27	11. Empire State, 9 yrs.	403 40
6. Bovee, 6 yrs.	429 6	12. Penn. Manor, 6 yrs.	403 32

An average crop for the twelve varieties of 433 bushels 41 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Uncle Sam, 4 yrs.	419 14	7. Brown's Rot Proof, 7 yrs.	364 14
2. Rose No. 9, 7 yrs.	406 3	8. Clay Rose, 9 yrs.	363 12
3. Seedling, No. 7, 7 yrs.	383 5	9. Cambridge Russet, 6 yrs.	358 1
4. Reeve's Rose, 8 yrs.	368 17	10. Vick's Extra Early, 7 yrs.	355 45
5. Bovee, 6 yrs.	366 27	11. Maule's Thoroughbred, 6 yrs.	353 38
6. Irish Daisy, 8 yrs.	366 4	12. Vanier, 9 yrs.	347 30

An average crop for the twelve varieties of 371 bushels 2 lbs. per acre.

CONCLUSIONS.

The evidence afforded by the results obtained from the comparative trial plots as given in this bulletin, shows that there are great differences in the relative productiveness of varieties even when grown side by side under similar conditions. It also shows, in that part of the bulletin devoted to the average of crops for a series of years, that this tendency to productiveness is in many instances a fixed quality manifested in the different climates of the Dominion, thus bringing these varieties near the top of the list from year to year. Among those sorts which have a remarkable record for persistent productiveness are the Banner oats, which have given for the past nine years (taking the average of the results obtained at all the experimental farms) 78 bushels 25 lbs. per acre; the Mensury barley, which has averaged for the same period 52 bushels 45 lbs., and the Preston wheat, which has given for nine years an average of 34 bushels 41 lbs. per acre.

Such facts point to the importance to farmers of choosing for seed those sorts which give the heaviest crops, so that farming in Canada may thus be made more profitable.

In this bulletin all the varieties which have been under trial for four or more years, are admitted into the comparative list with those which have been under trial for longer periods. As a result of this arrangement, some of the more promising of the recently introduced sorts have found their way into the lists of the best 12 or the best 6 varieties for weight of crop. It is, however, noteworthy that in most instances the larger part of these lists consists of varieties which have been under trial for 8 or 9 years, and which have maintained their prominence as productive sorts through the whole of that period.

During the past year the number of varieties under test has been reduced by discontinuing those which, after some years' trial, have not come up to a high standard of productiveness, retaining only the newer sorts and the best of the older ones in each case. This reduction in number permits of a more ready selection of varieties and brings out with greater prominence those of the highest excellence.

Provision has been made in connection with the distribution of samples for the improvement of seed (which takes place annually at the experimental farms) to have available considerable quantities of the very best and most productive sorts of cereals; so that any farmer in Canada who applies in good season, before March 1, may obtain a sample. These are sent out free by mail in cotton bags. The sample bags of oats contain 4 lbs., and those of wheat and barley, 5 lbs.: sufficient in each case to sow one-twentieth of an acre. Instructions accompany each sample. In many instances the 4 lbs. of oats, when carefully handled, have produced from 150 to 200 bushels by the end of the second year, showing that with attention and care any farmer may soon provide himself, under this liberal arrangement, with the best and most productive

strains of seed in sufficient quantities for a large area, at no cost to himself beyond that of his own labour.

That Canadian farmers readily avail themselves of these privileges, is seen from the fact that during the past six years 224,543 samples have been supplied to individual applicants : an annual average during this period of 37,424. The steady increase being made in the yearly average of crops in this country amounting in the aggregate to many millions of dollars, is no doubt due in large measure to the cultivation of improved and more productive varieties, brought about mainly by these annual distributions, by means of which more than 37,000 farmers have been led to join every year in these co-operative experiments with great profit to themselves and the country.